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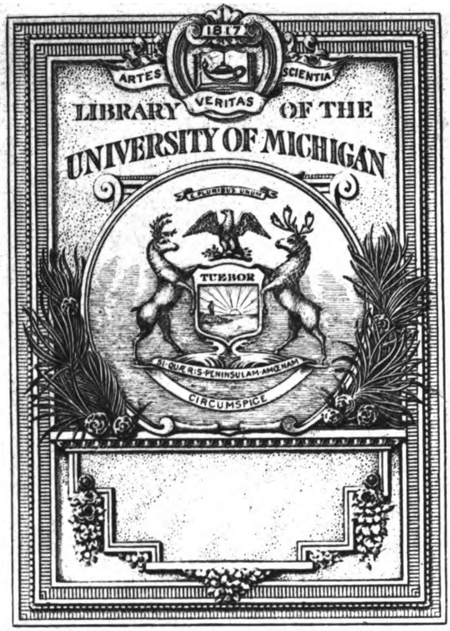

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APPENDIX

TO

MR. ADAMS's

Geometrical and Graphical Eſſays:

CONTAINING A

TABLE

OF

THE *QUANTITY* OF

NORTHING, SOUTHING, EASTING,
and WESTING,

Made on any Courſe, to every Degree
and Fifteenth Minute of the
Quadrant, at any Diſtance
from 1 to 100.

By *JOHN GALE.*

LONDON:
Printed by R. HINDMARSH, Printer to His Royal Highneſs
the Prince of Wales, No. 32, *Clerkenwell-Cloſe.*

1791.

Dist.	0 Degree.						1 Degree.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W	
1	1.000	0.004	1.000	0.009	1.000	0.013	1.000	0.017	1
2	2.000	0.009	2.000	0.017	2.000	0.026	2.000	0.035	2
3	3.000	0.013	3.000	0.026	3.000	0.039	3.000	0.052	3
4	4.000	0.017	4.000	0.035	4.000	0.052	3.999	0.070	4
5	5.000	0.022	5.000	0.044	5.000	0.065	4.999	0.087	5
6	6.000	0.026	6.000	0.052	5.999	0.078	5.999	0.105	6
7	7.000	0.031	7.000	0.061	6.999	0.092	6.999	0.122	7
8	8.000	0.035	8.000	0.070	7.999	0.105	7.999	0.140	8
9	9.000	0.039	9.000	0.078	8.999	0.118	8.999	0.157	9
10	10.000	0.044	10.000	0.087	9.999	0.131	9.998	0.175	10
11	11.000	0.048	11.000	0.096	10.999	0.144	10.998	0.192	11
12	12.000	0.052	12.000	0.105	11.999	0.157	11.998	0.209	12
13	13.000	0.057	12.999	0.113	12.999	0.170	12.998	0.227	13
14	14.000	0.061	13.999	0.122	13.999	0.183	13.998	0.244	14
15	15.000	0.065	14.999	0.131	14.999	0.196	14.998	0.262	15
16	16.000	0.070	15.999	0.140	15.999	0.209	15.998	0.279	16
17	17.000	0.074	16.999	0.148	16.999	0.222	16.997	0.297	17
18	18.000	0.079	17.999	0.157	17.998	0.236	17.997	0.314	18
19	19.000	0.083	18.999	0.166	18.998	0.249	18.997	0.332	19
20	20.000	0.087	19.999	0.174	19.998	0.262	19.997	0.349	20
21	21.000	0.092	20.999	0.183	20.998	0.275	20.997	0.366	21
22	22.000	0.096	21.999	0.192	21.998	0.288	21.997	0.384	22
23	23.000	0.100	22.999	0.201	22.998	0.301	22.996	0.401	23
24	24.000	0.105	23.999	0.209	23.998	0.314	23.996	0.419	24
25	25.000	0.109	24.999	0.218	24.998	0.327	24.996	0.436	25
26	26.000	0.113	25.999	0.227	25.998	0.340	25.996	0.454	26
27	27.000	0.118	26.999	0.236	26.998	0.353	26.996	0.471	27
28	28.000	0.122	27.999	0.244	27.998	0.366	27.996	0.489	28
29	29.000	0.127	28.999	0.253	28.998	0.380	28.996	0.506	29
30	30.000	0.131	29.999	0.262	29.997	0.393	29.995	0.524	30
31	31.000	0.135	30.999	0.270	30.997	0.406	30.995	0.541	31
32	32.000	0.140	31.999	0.279	31.997	0.419	31.995	0.558	32
33	33.000	0.144	32.999	0.288	32.997	0.432	32.995	0.576	33
34	34.000	0.148	33.999	0.297	33.997	0.445	33.995	0.593	34
35	35.000	0.153	34.999	0.305	34.997	0.458	34.995	0.611	35
36	36.000	0.157	35.999	0.314	35.997	0.471	35.995	0.628	36
37	37.000	0.161	36.999	0.323	36.997	0.484	36.994	0.646	37
38	38.000	0.166	37.999	0.332	37.997	0.497	37.994	0.663	38
39	39.000	0.170	38.999	0.340	38.997	0.510	38.994	0.681	39
40	40.000	0.175	39.998	0.349	39.997	0.524	39.994	0.698	40
41	41.000	0.179	40.998	0.358	40.996	0.537	40.994	0.715	41
42	42.000	0.183	41.998	0.366	41.996	0.550	41.994	0.733	42
43	43.000	0.188	42.998	0.375	42.996	0.563	42.993	0.750	43
44	44.000	0.192	43.998	0.384	43.996	0.576	43.993	0.768	44
45	45.000	0.196	44.998	0.393	44.996	0.589	44.993	0.785	45
46	46.000	0.201	45.998	0.401	45.996	0.602	45.993	0.803	46
47	47.000	0.205	46.998	0.410	46.996	0.615	46.993	0.820	47
48	48.000	0.209	47.998	0.419	47.996	0.628	47.993	0.838	48
49	49.000	0.214	48.998	0.428	48.996	0.641	48.993	0.855	49
50	50.000	0.218	49.998	0.436	49.996	0.654	49.992	0.873	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	89 Degrees.								

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Dift.	0 Degrees.						1 Degree.		Dift.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	51.000	0.222	50.998	0.445	50.996	0.668	50.992	0.890	51
52	52.000	0.227	51.998	0.454	51.996	0.681	51.992	0.907	52
53	52.999	0.231	52.998	0.463	52.995	0.694	52.992	0.925	53
54	53.999	0.236	53.998	0.471	53.995	0.707	53.992	0.942	54
55	54.999	0.240	54.998	0.480	54.995	0.720	54.992	0.960	55
56	55.999	0.244	55.998	0.489	55.995	0.733	55.991	0.977	56
57	56.999	0.249	56.998	0.497	56.995	0.746	56.991	0.995	57
58	57.999	0.253	57.998	0.506	57.995	0.759	57.991	1.012	58
59	58.999	0.257	58.998	0.515	58.995	0.772	58.991	1.030	59
60	59.999	0.262	59.998	0.524	59.995	0.785	59.991	1.047	60
61	60.999	0.266	60.998	0.532	60.995	0.798	60.991	1.065	61
62	61.999	0.270	61.998	0.541	61.995	0.812	61.991	1.082	62
63	62.999	0.275	62.998	0.550	62.995	0.825	62.990	1.099	63
64	63.999	0.279	63.998	0.559	63.995	0.838	63.990	1.117	64
65	64.999	0.284	64.998	0.567	64.994	0.851	64.990	1.134	65
66	65.999	0.288	65.997	0.576	65.994	0.864	65.990	1.152	66
67	66.999	0.292	66.997	0.585	66.994	0.877	66.990	1.169	67
68	67.999	0.297	67.997	0.593	67.994	0.890	67.990	1.187	68
69	68.699	0.301	68.997	0.602	68.994	0.903	68.989	1.204	69
70	69.999	0.305	69.997	0.611	69.994	0.916	69.989	1.222	70
71	70.999	0.310	70.997	0.620	70.994	0.929	70.989	1.239	71
72	71.999	0.314	71.997	0.628	71.994	0.942	71.989	1.257	72
73	72.999	0.318	72.997	0.637	72.994	0.956	72.989	1.274	73
74	73.999	0.323	73.997	0.646	73.994	0.969	73.989	1.291	74
75	74.999	0.327	74.997	0.655	74.994	0.982	74.989	1.309	75
76	75.999	0.332	75.997	0.663	75.993	0.995	75.988	1.326	76
77	76.999	0.336	76.997	0.672	76.993	1.008	76.988	1.344	77
78	77.999	0.340	77.997	0.681	77.993	1.021	77.988	1.361	78
79	78.999	0.345	78.997	0.689	78.993	1.034	78.988	1.379	79
80	79.999	0.349	79.997	0.698	79.993	1.047	79.988	1.396	80
81	80.999	0.353	80.997	0.707	80.993	1.060	80.988	1.414	81
82	81.999	0.358	81.997	0.716	81.993	1.073	81.988	1.431	82
83	82.999	0.362	82.997	0.724	82.993	1.086	82.987	1.448	83
84	83.999	0.366	83.997	0.733	83.993	1.099	83.987	1.466	84
85	84.999	0.371	84.997	0.742	84.993	1.113	84.987	1.483	85
86	85.999	0.375	85.997	0.751	85.993	1.126	85.987	1.501	86
87	86.999	0.380	86.997	0.759	86.993	1.139	86.987	1.518	87
88	87.999	0.384	87.997	0.768	87.992	1.152	87.987	1.536	88
89	88.999	0.388	88.997	0.777	88.992	1.165	88.986	1.553	89
90	89.999	0.393	89.997	0.785	89.992	1.178	89.986	1.571	90
91	90.999	0.397	90.997	0.794	90.992	1.191	90.986	1.588	91
92	91.999	0.401	91.996	0.803	91.992	1.204	91.986	1.606	92
93	92.999	0.406	92.996	0.812	92.992	1.217	92.986	1.623	93
94	93.999	0.410	93.996	0.820	93.992	1.230	93.986	1.640	94
95	94.999	0.414	94.996	0.829	94.992	1.243	94.986	1.658	95
96	95.999	0.419	95.996	0.838	95.992	1.257	95.985	1.675	96
97	96.999	0.423	96.996	0.847	96.992	1.270	96.985	1.693	97
98	97.999	0.428	97.996	0.855	97.992	1.283	97.985	1.710	98
99	98.999	0.432	98.996	0.864	98.992	1.296	98.985	1.728	99
100	99.999	0.436	99.996	0.873	99.991	1.309	99.985	1.745	100
Dift.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dift.
	45 Min.		30 Min.		15 Min.		0 Min.		
	89 Degrees.								

Dist.	1 Degree.						2 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	1.000	0.022	1.000	0.026	1.000	0.031	0.999	0.035	1
2	2.000	0.044	1.999	0.052	1.999	0.061	1.999	0.070	2
3	2.999	0.065	2.999	0.079	2.999	0.092	2.998	0.105	3
4	3.999	0.087	3.999	0.105	3.998	0.122	3.998	0.140	4
5	4.999	0.109	4.998	0.131	4.998	0.153	4.997	0.174	5
6	5.999	0.131	5.998	0.157	5.997	0.183	5.996	0.209	6
7	6.998	0.153	6.998	0.183	6.997	0.214	6.996	0.244	7
8	7.998	0.175	7.997	0.209	7.996	0.244	7.995	0.279	8
9	8.998	0.196	8.997	0.236	8.996	0.275	8.994	0.314	9
10	9.998	0.218	9.997	0.262	9.995	0.305	9.994	0.349	10
11	10.997	0.240	10.996	0.288	10.995	0.336	10.993	0.384	11
12	11.997	0.262	11.996	0.314	11.994	0.366	11.993	0.419	12
13	12.997	0.284	12.996	0.340	12.994	0.397	12.992	0.454	13
14	13.997	0.305	13.995	0.366	13.993	0.427	13.991	0.489	14
15	14.996	0.327	14.995	0.393	14.993	0.458	14.991	0.523	15
16	15.996	0.349	15.995	0.419	15.993	0.489	15.990	0.558	16
17	16.996	0.371	16.994	0.445	16.992	0.519	16.990	0.593	17
18	17.996	0.393	17.994	0.471	17.992	0.550	17.989	0.628	18
19	18.995	0.415	18.993	0.497	18.991	0.580	18.988	0.663	19
20	19.995	0.436	19.993	0.523	19.991	0.611	19.988	0.698	20
21	20.995	0.458	20.993	0.550	20.990	0.641	20.987	0.733	21
22	21.995	0.480	21.992	0.576	21.990	0.672	21.987	0.768	22
23	22.995	0.502	22.992	0.602	22.989	0.702	22.986	0.803	23
24	23.994	0.524	23.992	0.628	23.989	0.733	23.985	0.838	24
25	24.994	0.545	24.991	0.654	24.988	0.763	24.985	0.872	25
26	25.994	0.567	25.991	0.681	25.988	0.794	25.984	0.907	26
27	26.994	0.598	26.991	0.707	26.987	0.824	26.984	0.942	27
28	27.993	0.611	27.990	0.733	27.987	0.855	27.983	0.977	28
29	28.993	0.633	28.990	0.759	28.986	0.886	28.982	1.012	29
30	29.993	0.654	29.990	0.785	29.986	0.916	29.982	1.047	30
31	30.993	0.676	30.989	0.811	30.986	0.947	30.981	1.082	31
32	31.992	0.698	31.989	0.838	31.985	0.977	31.981	1.117	32
33	32.992	0.720	32.989	0.864	32.985	1.008	32.980	1.152	33
34	33.992	0.742	33.988	0.890	33.984	1.038	33.979	1.187	34
35	34.992	0.764	34.988	0.916	34.984	1.069	34.979	1.221	35
36	35.991	0.785	35.988	0.942	35.983	1.099	35.978	1.256	36
37	36.991	0.807	36.987	0.968	36.983	1.130	36.977	1.291	37
38	37.991	0.829	37.987	0.995	37.982	1.160	37.977	1.326	38
39	38.991	0.851	38.987	1.021	38.982	1.191	38.976	1.361	39
40	39.990	0.873	39.986	1.047	39.981	1.221	39.976	1.396	40
41	40.990	0.894	40.986	1.073	40.981	1.252	40.975	1.431	41
42	41.990	0.916	41.986	1.099	41.980	1.283	41.974	1.466	42
43	42.990	0.938	42.985	1.126	42.980	1.313	42.974	1.501	43
44	43.990	0.960	43.985	1.152	43.979	1.344	43.973	1.536	44
45	44.989	0.982	44.985	1.178	44.979	1.374	44.973	1.570	45
46	45.989	1.004	45.984	1.204	45.979	1.405	45.972	1.605	46
47	46.989	1.025	46.984	1.230	46.978	1.435	46.971	1.640	47
48	47.989	1.047	47.984	1.256	47.978	1.466	47.971	1.675	48
49	48.988	1.069	48.983	1.283	48.977	1.496	48.970	1.710	49
50	49.988	1.091	49.983	1.309	49.977	1.527	49.970	1.745	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	88 Degrees.								

Dist.	1 Degree.						2 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.988	1.113	50.983	1.335	50.976	1.557	50.969	1.780	51
52	51.988	1.134	51.982	1.361	51.976	1.588	51.968	1.815	52
53	52.987	1.156	52.982	1.387	52.975	1.618	52.968	1.850	53
54	53.987	1.178	53.981	1.414	53.975	1.649	53.967	1.885	54
55	54.987	1.200	54.981	1.440	54.974	1.680	54.966	1.919	55
56	55.987	1.222	55.981	1.466	55.974	1.710	55.966	1.954	56
57	56.986	1.243	56.980	1.492	56.973	1.741	56.965	1.989	57
58	57.986	1.265	57.980	1.518	57.973	1.771	57.965	2.024	58
59	58.986	1.287	58.980	1.544	58.972	1.802	58.964	2.059	59
60	59.986	1.309	59.979	1.571	59.972	1.832	59.963	2.094	60
61	60.985	1.331	60.979	1.597	60.972	1.863	60.963	2.129	61
62	61.985	1.353	61.979	1.623	61.971	1.893	61.962	2.164	62
63	62.985	1.374	62.978	1.649	62.971	1.924	62.962	2.199	63
64	63.985	1.396	63.978	1.675	63.970	1.954	63.961	2.234	64
65	64.985	1.418	64.978	1.701	64.970	1.985	64.960	2.268	65
66	65.984	1.440	65.977	1.728	65.969	2.015	65.960	2.303	66
67	66.984	1.462	66.977	1.754	66.969	2.046	66.959	2.338	67
68	67 984	1.483	67.977	1.780	67.968	2.077	67.959	2.373	68
69	68.984	1.505	68.976	1.806	68.968	2.107	68.958	2 408	69
70	69.983	1.527	69.976	1.832	69.967	2.138	69.957	2.443	70
71	70.983	1.549	70.976	1.859	70.967	2.168	70.957	2.478	71
72	71.983	1.571	71.975	1.885	71.966	2.199	71.956	2.513	72
73	72.983	1.593	72.975	1.911	72.966	2.229	72.956	2.548	73
74	73.982	1.614	73.975	1.937	73.965	2.260	73.955	2.583	74
75	74.982	1.636	74.974	1.963	74.965	2.290	74.954	2.617	75
76	75.982	1.658	75.974	1.989	75.965	2.321	75.954	2.652	76
77	76.982	1.680	76.974	2.016	76.964	2.351	76.953	2.687	77
78	77.981	1.702	77.973	2.042	77.964	2.382	77.952	2.722	78
79	78.981	1.723	78.973	2.068	78.963	2.412	78.952	2.757	79
80	79.981	1.745	79.973	2.094	79.963	2.443	79.951	2.792	80
81	80.981	1.767	80.972	2.120	80.962	2.474	80.951	2.827	81
82	81.980	1.789	81.972	2.146	81.962	2.504	81.950	2.862	82
83	82.980	1.811	82.972	2.173	82.961	2.535	82.949	2.897	83
84	83.980	1.833	83.971	2.199	83.961	2.565	83.949	2.932	84
85	84 980	1.854	84.971	2.225	84.960	2.596	84.948	2.966	85
86	85.980	1.876	85.971	2.251	85.960	2.626	85.948	3.001	86
87	86.979	1.898	86.970	2.277	86.959	2.657	86.947	3.036	87
88	87.979	1.920	87.970	2.304	87.959	2.687	87.946	3.071	88
89	88.979	1.942	88.969	2.330	88.958	2.718	88.946	3.106	89
90	89.979	1.963	89.969	2.356	89.958	2.748	89.945	3.141	90
91	90.978	1.985	90.969	2.382	90.958	2.779	90.945	3.176	91
92	91.978	2.007	91.968	2.408	91.957	2.809	91.944	3.211	92
93	92.978	2.029	92.968	2.434	92.957	2.840	92.943	3.246	93
94	93.978	2.051	93.968	2.461	93.956	2.871	93.943	3.281	94
95	94.977	2.072	94.967	2.487	94.956	2.901	94.942	3.315	95
96	95.977	2.094	95.967	2.513	95.955	2.932	95.942	3.350	96
97	96.977	2.116	96.967	2.539	96.955	2.962	96.941	3.385	97
98	97.977	2.138	97.966	2.565	97.954	2.993	97.940	3.420	98
99	98.976	2.160	98.966	2.591	98.954	3.023	98.940	3.455	99
100	99.976	2.181	99.966	2.618	99.953	3.054	99.939	3.490	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	88 Degrees.								

Dist.	2 Degrees.						3 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.999	0.039	0.999	0.044	0.999	0.048	0.999	0.052	1
2	1.998	0.078	1.998	0.087	1.998	0.096	1.997	0.105	2
3	2.998	0.118	2.997	0.131	2.996	0.144	2.996	0.157	3
4	3.997	0.157	3.996	0.174	3.995	0.192	3.994	0.209	4
5	4.996	0.196	4.995	0.218	4.994	0.240	4.993	0.262	5
6	5.995	0.236	5.994	0.262	5993	0.288	5.992	0.314	6
7	6.995	0.275	6.993	0.305	6.992	0.336	6.990	0.366	7
8	7.994	0.314	7.992	0.349	7.991	0.384	7.989	0.419	8
9	8.993	0.353	8.991	0.393	8.990	0.432	8.988	0.471	9
10	9.992	0.393	9.990	0.436	9.988	0.480	9.986	0.523	10
11	10.992	0.432	10.996	0.480	10.987	0.528	10.985	0.576	11
12	11.991	0.471	11.989	0.523	11.986	0.576	11.984	0.628	12
13	12.990	0.510	12.988	0.567	12.985	0.624	12.982	0.680	13
14	13.989	0.550	13.987	0.611	13.984	0.672	13.981	0.733	14
15	14.988	0.589	14.986	0.654	14.983	0.720	14.979	0.785	15
16	15.988	0.628	15.985	0.698	15.982	0.768	15.978	0.837	16
17	16.987	0.667	16.984	0.741	16.980	0.816	16.977	0.890	17
18	17.986	0.707	17.983	0.785	17.979	0.864	17.975	0.942	18
19	18.985	0.746	18.982	0.829	18.978	0.912	18.974	0.994	19
20	19.985	0.785	19.981	0.872	19.977	0.960	19.973	1.047	20
21	20.984	0.824	20.980	0.916	20.976	1.008	20.971	1.099	21
22	21.983	0.864	21.979	0.960	21.975	1.056	21.970	1.151	22
23	22.982	0.903	22.978	1.003	22.974	1.103	22.968	1.204	23
24	23.981	0.942	23.977	1.047	23.972	1.151	23.967	1.256	24
25	24.981	0.981	24.976	1.090	24.971	1.199	24.966	1.308	25
26	25.980	1.021	25.975	1.134	25.970	1.247	25.964	1.361	26
27	26.979	1.060	26.974	1.178	26.969	1.295	26.963	1.413	27
28	27.978	1.099	27.973	1.221	27.968	1.343	27.962	1.465	28
29	28.978	1.138	28.972	1.265	28.967	1.391	28.960	1.518	29
30	29.977	1.178	29.971	1.309	29.965	1.439	29.959	1.570	30
31	30.976	1.217	30.970	1.352	30.964	1.487	30.958	1.622	31
32	31.975	1.256	31.970	1.396	31.963	1.535	31.956	1.675	32
33	32.975	1.296	32.969	1.439	32.962	1.583	32.955	1.727	33
34	33.974	1.335	33.968	1.483	33.961	1.631	33.953	1.779	34
35	34.973	1.374	34.967	1.527	34.960	1.679	34.952	1.832	35
36	35.972	1.413	35.966	1.570	35.959	1.727	35.951	1.884	36
37	36.971	1.453	36.965	1.614	36.957	1.775	36.949	1.936	37
38	37.971	1.492	37.964	1.657	37.956	1.823	37.948	1.989	38
39	38.970	1.531	38.963	1.701	38.955	1.871	38.947	2.041	39
40	39.969	1.570	39.962	1.745	39.954	1.919	39.945	2.093	40
41	40.968	1.610	40.961	1.788	40.953	1.967	40.944	2.146	41
42	41.968	1.649	41.960	1.832	41.952	2.015	41.942	2.198	42
43	42.967	1.688	42.959	1.876	42.950	2.063	42.941	2.250	43
44	43.966	1.727	43.958	1.919	43.949	2.111	43.940	2.303	44
45	44.965	1.767	44.957	1.963	44.948	2.159	44.938	2.355	45
46	45.965	1.806	45.956	2.006	45.947	2.207	45.937	2.407	46
47	46.964	1.845	46.955	2.050	46.946	2.255	46.936	2.460	47
48	47.963	1.884	47.954	2.094	47.945	2.303	47.934	2.512	48
49	48.962	1.924	48.953	2.137	48.944	2.351	48.933	2.564	49
50	49.961	1.963	49.952	2.181	49.942	2.399	49.931	2.617	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	87 Degrees.								

Dist.	2 Degrees.						3 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.961	2.002	50.951	2.225	50.941	2.447	50.930	2.669	51
52	51.960	2.041	51.951	2.268	51.940	2.495	51.929	2.721	52
53	52.959	2.081	52.950	2.312	52.939	2.543	52.927	2.774	53
54	53.958	2.120	53.949	2.355	53.938	2.591	53.926	2.826	54
55	54.958	2.159	54.948	2.399	54.937	2.639	54.925	2.878	55
56	55.957	2.198	55.947	2.443	55.936	2.687	55.923	2.931	56
57	56.956	2.238	56.946	2.486	56.934	2.735	56.922	2.983	57
58	57.955	2.277	57.945	2.530	57.933	2.783	57.921	3.035	58
59	58.955	2.316	58.944	2.573	58.932	2.831	58.919	3.088	59
60	59.954	2.356	59.943	2.617	59.931	2.879	59.918	3.140	60
61	60.953	2.395	60.942	2.661	60.930	2.927	60.916	3.192	61
62	61.952	2.434	61.941	2.704	61.929	2.975	61.915	3.245	62
63	62.951	2.473	62.940	2.748	62.927	3.023	62.914	3.297	63
64	63.951	2.513	63.939	2.792	63.926	3.071	63.912	3.349	64
65	64.950	2.552	64.938	2.835	64.925	3.119	64.911	3.402	65
66	65.949	2.591	65.937	2.879	65.924	3.167	65.910	3.454	66
67	66.948	2.630	66.936	2.922	66.923	3.215	66.908	3.506	67
68	67.948	2.670	67.935	2.966	67.922	3.263	67.907	3.559	68
69	68.947	2.709	68.934	3.010	68.921	3.310	68.905	3.611	69
70	69.946	2.748	69.933	3.053	69.919	3.358	69.904	3.663	70
71	70.945	2.787	70.932	3.097	70.918	3.406	70.903	3.716	71
72	71.944	2.827	71.931	3.141	71.917	3.454	71.901	3.768	72
73	72.944	2.866	72.931	3.184	72.916	3.502	72.900	3.820	73
74	73.943	2.905	73.930	3.228	73.915	3.550	73.899	3.873	74
75	74.942	2.944	74.929	3.271	74.914	3.598	74.897	3.925	75
76	75.941	2.984	75.928	3.315	75.912	3.646	75.896	3.977	76
77	76.941	3.023	76.927	3.359	76.911	3.694	76.894	4.030	77
78	77.940	3.062	77.926	3.402	77.910	3.742	77.893	4.082	78
79	78.939	3.101	78.925	3.446	78.909	3.790	78.892	4.134	79
80	79.938	3.141	79.924	3.490	79.908	3.838	79.890	4.187	80
81	80.938	3.180	80.923	3.533	80.907	3.886	80.889	4.239	81
82	81.937	3.219	81.922	3.577	81.906	3.934	81.888	4.292	82
83	82.936	3.259	82.921	3.620	82.904	3.982	82.886	4.344	83
84	83.935	3.298	83.920	3.664	83.903	4.030	83.885	4.396	84
85	84.934	3.337	84.919	3.708	84.902	4.078	84.884	4.449	85
86	85.934	3.376	85.918	3.751	85.901	4.126	85.882	4.501	86
87	86.933	3.416	86.917	3.795	86.900	4.174	86.881	4.553	87
88	87.932	3.455	87.916	3.838	87.899	4.222	87.879	4.606	88
89	88.931	3.494	88.915	3.882	88.898	4.270	88.878	4.658	89
90	89.931	3.533	89.914	3.926	89.896	4.318	89.877	4.710	90
91	90.930	3.573	90.913	3.969	90.895	4.366	90.875	4.763	91
92	91.929	3.612	91.912	4.013	91.894	4.414	91.874	4.815	92
93	92.928	3.651	92.911	4.057	92.893	4.462	92.873	4.867	93
94	93.928	3.690	93.911	4.100	93.892	4.510	93.871	4.920	94
95	94.927	3.730	94.910	4.144	94.891	4.558	94.870	4.972	95
96	95.926	3.769	95.909	4.187	95.889	4.606	95.868	5.024	96
97	96.925	3.808	96.908	4.231	96.888	4.654	96.867	5.077	97
98	97.924	3.847	97.907	4.275	97.887	4.702	97.866	5.129	98
99	98.924	3.887	98.906	4.318	98.886	4.750	98.864	5.181	99
100	99.923	3.926	99.905	4.362	99.885	4.798	99.863	5.234	100
	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	
	45 Min.		30 Min.		15 Min.		0 Min.		
Dist.	87 Degrees.								Dist.

Dist.	3 Degrees.						4 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.998	0.057	0.998	0.061	0.998	0.065	0.998	0.070	1
2	1.997	0.113	1.996	0.122	1.996	0.131	1.995	0.140	2
3	2.995	0.170	2.994	0.183	2.994	0.196	2.993	0.209	3
4	3.994	0.227	3.992	0.244	3.991	0.262	3.990	0.279	4
5	4.992	0.283	4.991	0.305	4.989	0.327	4 988	0.349	5
6	5.990	0.340	5.989	0.366	5.987	0.392	5.985	0.419	6
7	6.989	0.397	6.987	0.427	6.985	0.458	6.983	0.488	7
8	7.987	0.453	7.985	0.488	7.983	0.523	7.980	0.558	8
9	8.985	0.510	8.983	0.549	8.981	0.589	8.978	0.628	9
10	9.984	0.567	9.981	0.610	9.979	0.654	9.976	0.698	10
11	10.982	0.624	10.979	0.672	10.976	0.719	10.973	0.767	11
12	11.981	0.680	11.978	0.733	11.974	0.785	11.971	0.837	12
13	12.979	0.737	12.976	0.794	12.972	0.850	12.968	0.907	13
14	13.977	0.794	13.974	0.855	13.970	0.916	13.966	0.977	14
15	14.976	0.850	14.972	0.916	14.968	0.981	14.963	1.046	15
16	15.974	0.907	15.970	0.977	15.966	1.046	15.961	1.116	16
17	16.973	0.964	16.968	1.038	16.964	1.112	16.959	1.186	17
18	17.971	1.020	17.966	1.099	17.961	1.177	17.956	1.256	18
19	18.969	1.077	18.963	1.160	18.959	1.243	18.954	1.325	19
20	19.968	1.134	19.963	1.221	19.957	1.308	19.951	1.395	20
21	20.966	1.190	20.961	1.282	20.955	1.373	20.949	1.465	21
22	21.965	1.247	21.959	1.343	21.953	1.439	21.946	1.535	22
23	22.963	1.304	22.957	1.404	22.951	1.504	22.944	1.604	23
24	23.961	1.361	23.955	1.465	23.949	1.570	23.942	1.674	24
25	24.960	1.417	24.953	1.526	24.946	1.635	24.939	1.744	25
26	25.958	1.474	25.952	1.587	25.944	1.700	25.937	1.814	26
27	26.957	1.531	26.950	1.648	26.942	1.766	26 934	1.883	27
28	27.955	1.587	27.948	1.709	27.940	1.831	27.932	1.953	28
29	28.953	1.644	28.946	1.770	28.938	1.897	28.929	2.023	29
30	29.952	1.701	29.944	1.831	29.936	1.962	29.927	2.093	30
31	30.950	1.757	30.942	1.893	30.934	2.027	30.924	2.163	31
32	31.949	1.814	31.940	1.954	31.931	2.093	31.922	2.232	32
33	32.947	1.871	32.938	2.015	32.929	2.158	32.920	2.302	33
34	33.945	1.928	33.937	2.076	33.927	2.224	33.917	2.372	34
35	34.944	1.984	34.935	2.137	34.925	2.289	34.915	2.442	35
36	35.942	2.041	35.933	2.198	35.923	2.354	35.912	2.511	36
37	36.940	2.098	36.931	2.259	36.921	2.420	36.910	2.581	37
38	37.939	2.154	37.929	2.320	37.919	2.485	37.907	2.651	38
39	38.937	2.211	38.927	2.381	38.916	2.551	38.905	2.721	39
40	39.936	2.268	39.925	2.442	39.914	2.616	39.903	2.790	40
41	40.934	2.324	40.924	2.503	40.912	2.681	40.900	2.860	41
42	41.932	2.381	41.922	2.564	41.910	2.747	41.898	2.930	42
43	42.931	2.438	42.920	2.625	42.908	2.812	42.895	3.000	43
44	43.929	2.494	43.918	2.686	43.906	2.878	43.893	3.069	44
45	44.928	2.551	44.916	2.747	44.904	2.943	44.890	3.139	45
46	45.926	2.608	45.914	2.808	45.902	3.008	45.888	3.209	46
47	46.924	2.665	46.912	2.869	46.899	3.074	46.886	3.279	47
48	47.923	2.721	47.910	2.930	47.897	3.139	47.883	3.348	48
49	48.921	2.778	48.909	2.991	48.895	3.205	48.881	3.418	49
50	49.920	2.835	49.907	3.052	49.893	3.270	49.878	3.488	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	86 Degrees.								

Dist.	3 Degrees.						4 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.918	2.891	50.905	3.114	50.891	3.336	50.876	3.558	51
52	51.916	2.948	51.903	3.175	51.889	3.401	51.873	3.627	52
53	52.915	3.005	52.901	3.236	52.887	3.466	52.871	3.697	53
54	53.913	3.061	53.899	3.297	53.884	3.532	53.868	3.767	54
55	54.912	3.118	54.897	3.358	54.882	3.597	54.866	3.837	55
56	55.910	3.175	55.896	3.419	55.880	3.663	55.864	3.906	56
57	56.908	3.231	56.894	3.480	56.878	3.728	56.861	3.976	57
58	57.907	3.288	57.892	3.541	57.876	3.793	57.859	4.046	58
59	58.905	3.345	58.890	3.602	58.874	3.859	58.856	4.116	59
60	59.904	3.402	59.888	3.663	59.872	3.924	59.854	4.185	60
61	60.902	3.458	60.886	3.724	60.869	3.990	60.851	4.255	61
62	61.900	3.515	61.884	3.785	61.867	4.055	61.849	4.325	62
63	62.899	3.572	62.882	3.846	62.865	4.120	62.847	4.395	63
64	63.897	3.628	63.881	3.907	63.863	4.186	63.844	4.464	64
65	64.895	3.685	64.879	3.968	64.861	4.251	64.842	4.534	65
66	65.894	3.742	65.877	4.029	65.859	4.317	65.839	4.604	66
67	66.892	3.798	66.875	4.090	66.857	4.382	66.837	4.674	67
68	67.891	3.855	67.873	4.151	67.854	4.447	67.834	4.743	68
69	68.889	3.912	68.871	4.212	68.852	4.513	68.832	4.813	69
70	69.887	3.968	69.869	4.273	69.850	4.578	69.829	4.883	70
71	70.886	4.025	70.868	4.334	70.848	4.644	70.827	4.953	71
72	71.884	4.082	71.866	4.395	71.846	4.709	71.825	5.022	72
73	72.883	4.139	72.864	4.456	72.844	4.774	72.822	5.092	73
74	73.881	4.195	73.862	4.518	73.842	4.840	73.820	5.162	74
75	74.879	4.252	74.860	4.579	74.839	4.905	74.817	5.232	75
76	75.878	4.309	75.858	4.640	75.837	4.971	75.815	5.301	76
77	76.876	4.365	76.856	4.701	76.835	5.036	76.812	5.371	77
78	77.875	4.422	77.855	4.762	77.833	5.101	77.810	5.441	78
79	78.873	4.479	78.853	4.823	78.831	5.167	78.808	5.511	79
80	79.871	4.535	79.851	4.884	79.829	5.232	79.805	5.581	80
81	80.870	4.592	80.849	4.945	80.827	5.298	80.803	5.650	81
82	81.868	4.649	81.847	5.006	81.824	5.363	81.800	5.720	82
83	82.867	4.705	82.845	5.067	82.822	5.428	82.798	5.790	83
84	83.865	4.762	83.843	5.128	83.820	5.494	83.795	5.860	84
85	84.863	4.819	84.841	5.189	84.818	5.559	84.793	5.929	85
86	85.862	4.876	85.840	5.250	85.816	5.625	85.791	5.999	86
87	86.860	4.932	86.838	5.311	86.814	5.690	86.788	6.069	87
88	87.858	4.989	87.836	5.372	87.812	5.755	87.786	6.139	88
89	88.857	5.046	88.834	5.433	88.809	5.821	88.783	6.208	89
90	89.855	5.102	89.832	5.494	89.807	5.886	89.781	6.278	90
91	90.854	5.159	90.830	5.555	90.805	5.952	90.778	6.348	91
92	91.852	5.216	91.828	5.616	91.803	6.017	91.776	6.418	92
93	92.850	5.272	92.827	5.678	92.801	6.082	92.773	6.487	93
94	93.849	5.329	93.825	5.739	93.799	6.148	93.771	6.557	94
95	94.847	5.386	94.823	5.800	94.797	6.213	94.769	6.627	95
96	95.846	5.442	95.821	5.861	95.794	6.279	95.766	6.697	96
97	96.844	5.499	96.819	5.922	96.792	6.344	96.764	6.766	97
98	97.842	5.556	97.817	5.983	97.790	6.409	97.761	6.836	98
99	98.841	5.613	98.815	6.044	98.788	6.475	98.759	6.906	99
100	99.839	5.669	99.813	6.105	99.786	6.540	99.756	6.976	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	86 Degrees.								

Diſt.	4 Degrees.						5 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.997	0.074	0.997	0.078	0.997	0.083	0.996	0.087	1
2	1.995	0.148	1.994	0.157	1.993	0.166	1.992	0.174	2
3	2.992	0.222	2.991	0.235	2.990	0.248	2.989	0.261	3
4	3.989	0.296	3.988	0.314	3.986	0.331	3.985	0.349	4
5	4.986	0.370	4.985	0.392	4.983	0.414	4.981	0.436	5
6	5.984	0.445	5.982	0.471	5.979	0.497	5.977	0.523	6
7	6.981	0.519	6.978	0.549	6.976	0.580	6.973	0.610	7
8	7.978	0.593	7.975	0.628	7.972	0.662	7.970	0.697	8
9	8.975	0.667	8.972	0.706	8.969	0.745	8.966	0.784	9
10	9.973	0.741	9.969	0.785	9.966	0.828	9.962	0.872	10
11	10.970	0.815	10.966	0.863	10.962	0.911	10.958	0.959	11
12	11.967	0.889	11.963	0.941	11.959	0.994	11.954	1.046	12
13	12.964	0.963	12.960	1.020	12.955	1.076	12.951	1.133	13
14	13.962	1.037	13.957	1.098	13.952	1.159	13.947	1.220	14
15	14.959	1.112	14.954	1.177	14.948	1.242	14.943	1.307	15
16	15.956	1.186	15.951	1.255	15.945	1.325	15.939	1.394	16
17	16.953	1.260	16.948	1.334	16.942	1.408	16.935	1.482	17
18	17.951	1.334	17.945	1.412	17.938	1.490	17.932	1.569	18
19	18.948	1.408	18.941	1.491	18.935	1.573	18.928	1.656	19
20	19.945	1.482	19.938	1.569	19.931	1.656	19.924	1.743	20
21	20.942	1.556	20.935	1.648	20.928	1.739	20.920	1.830	21
22	21.940	1.630	21.932	1.726	21.924	1.822	21.916	1.917	22
23	22.937	1.704	22.929	1.805	22.921	1.905	22.912	2.005	23
24	23.934	1.779	23.926	1.883	23.918	1.987	23.909	2.092	24
25	24.931	1.853	24.923	1.961	24.914	2.070	24.905	2.179	25
26	25.929	1.927	25.920	2.040	25.911	2.153	25.901	2.266	26
27	26.926	2.001	26.917	2.118	26.907	2.236	26.897	2.353	27
28	27.923	2.075	27.914	2.197	27.904	2.319	27.893	2.440	28
29	28.920	2.149	28.911	2.275	28.900	2.401	28.890	2.527	29
30	29.918	2.223	29.908	2.354	29.897	2.484	29.886	2.615	30
31	30.915	2.297	30.904	2.432	30.894	2.567	30.882	2.702	31
32	31.912	2.371	31.901	2.511	31.890	2.650	31.878	2.789	32
33	32.909	2.446	32.898	2.589	32.887	2.733	32.874	2.876	33
34	33.907	2.520	33.895	2.668	33.883	2.815	33.871	2.963	34
35	34.904	2.594	34.892	2.746	34.880	2.898	34.867	3.050	35
36	35.901	2.668	35.889	2.824	35.876	2.981	35.863	3.138	36
37	36.898	2.742	36.886	2.903	36.873	3.064	36.859	3.225	37
38	37.896	2.816	37.883	2.981	37.869	3.147	37.855	3.312	38
39	38.893	2.890	38.880	3.060	38.866	3.229	38.852	3.399	39
40	39.890	2.964	39.877	3.138	39.863	3.312	39.848	3.486	40
41	40.887	3.038	40.874	3.217	40.859	3.395	40.844	3.573	41
42	41.885	3.113	41.871	3.295	41.856	3.478	41.840	3.660	42
43	42.882	3.187	42.867	3.374	42.852	3.561	42.836	3.748	43
44	43.879	3.261	43.864	3.452	43.849	3.644	43.832	3.835	44
45	44.876	3.335	44.861	3.531	44.845	3.726	44.829	3.922	45
46	45.874	3.409	45.858	3.609	45.842	3.809	45.825	4.009	46
47	46.871	3.483	46.855	3.688	46.839	3.892	46.821	4.096	47
48	47.868	3.557	47.852	3.766	47.835	3.975	47.817	4.183	48
49	48.865	3.631	48.849	3.844	48.832	4.058	48.814	4.271	49
50	49.863	3.705	49.846	3.923	49.828	4.140	49.810	4.358	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	85 Degrees.								

Dist.	4 Degrees.						5 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.860	3.779	50.843	4.001	50.825	4.223	50.806	4.445	51
52	51.857	3.854	51.840	4.080	51.821	4.306	51.802	4.532	52
53	52.854	3.928	52.837	4.158	52.818	4.389	52.798	4.619	53
54	53.852	4.002	53.834	4.237	53.815	4.472	53.795	4.706	54
55	54.849	4.076	54.830	4.315	54.811	4.554	54.791	4.794	55
56	55.846	4.150	55.827	4.394	55.808	4.637	55.787	4.881	56
57	56.843	4.224	56.824	4.472	56.804	4.720	56.783	4.968	57
58	57.841	4.298	57.821	4.551	57.801	4.803	57.779	5.055	58
59	58.838	4.372	58.818	4.629	58.797	4.886	58.775	5.142	59
60	59.835	4.446	59.815	4.707	59.794	4.968	59.772	5.229	60
61	60.832	4.521	60.812	4.786	60.790	5.051	60.768	5.316	61
62	61.830	4.595	61.809	4.864	61.787	5.134	61.764	5.404	62
63	62.827	4.669	62.806	4.943	62.784	5.217	62.760	5.491	63
64	63.824	4.743	63.803	5.021	63.780	5.300	63.756	5.578	64
65	64.821	4.817	64.800	5.100	64.777	5.383	64.753	5.665	65
66	65.819	4.891	65.797	5.178	65.773	5.465	65.749	5.752	66
67	66.816	4.965	66.793	5.257	66.770	5.548	66.745	5.839	67
68	67.813	5.039	67.790	5.335	67.766	5.631	67.741	5.927	68
69	68.810	5.113	68.787	5.414	68.763	5.714	68.737	6.014	69
70	69.808	5.188	69.784	5.492	69.760	5.797	69.734	6.101	70
71	70.805	5.262	70.781	5.571	70.756	5.879	70.730	6.188	71
72	71.802	5.336	71.778	5.649	71.753	5.962	71.726	6.275	72
73	72.799	5.410	72.775	5.727	72.749	6.045	72.722	6.362	73
74	73.797	5.484	73.772	5.806	73.746	6.128	73.718	6.450	74
75	74.794	5.558	74.769	5.884	74.742	6.211	74.715	6.537	75
76	75.791	5.632	75.766	5.963	75.739	6.293	75.711	6.624	76
77	76.788	5.706	76.763	6.041	76.736	6.376	76.707	6.711	77
78	77.786	5.780	77.760	6.120	77.732	6.459	77.703	6.798	78
79	78.783	5.855	78.756	6.198	78.729	6.542	78.699	6.885	79
80	79.780	5.929	79.753	6.277	79.725	6.625	79.696	6.972	80
81	80.777	6.003	80.750	6.355	80.722	6.707	80.692	7.060	81
82	81.775	6.077	81.747	6.434	81.718	6.790	81.688	7.147	82
83	82.772	6.151	82.744	6.512	82.715	6.873	82.684	7.234	83
84	83.769	6.225	83.741	6.591	83.712	6.956	83.680	7.321	84
85	84.766	6.299	84.738	6.669	84.708	7.039	84.677	7.408	85
86	85.764	6.373	85.735	6.747	85.705	7.122	85.673	7.495	86
87	86.761	6.447	86.732	6.826	86.701	7.204	86.669	7.583	87
88	87.758	6.521	87.729	6.904	87.698	7.287	87.665	7.670	88
89	88.755	6.596	88.726	6.983	88.694	7.370	88.661	7.757	89
90	89.753	6.670	89.723	7.061	89.691	7.453	89.658	7.844	90
91	90.750	6.744	90.719	7.140	90.687	7.536	90.654	7.931	91
92	91.747	6.818	91.716	7.218	91.684	7.618	91.650	8.018	92
93	92.744	6.892	92.713	7.297	92.681	7.701	92.646	8.105	93
94	93.742	6.966	93.710	7.375	93.677	7.784	93.642	8.193	94
95	94.739	7.040	94.707	7.454	94.674	7.867	94.638	8.280	95
96	95.736	7.114	95.704	7.532	95.670	7.950	95.635	8.367	96
97	96.733	7.188	96.701	7.610	96.667	8.032	96.631	8.454	97
98	97.731	7.263	97.698	7.689	97.663	8.115	97.627	8.541	98
99	98.728	7.237	98.695	7.767	98.660	8.198	98.623	8.628	99
100	99.725	7.411	99.692	7.846	99.657	8.281	99.619	8.716	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	85 Degrees.								

Dist.	5 Degrees.						6 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.996	0.092	0.995	0.096	0.995	0.100	0.995	0.105	1
2	1.992	0.183	1.991	0.192	1.990	0.200	1.989	0.209	2
3	2.987	0.275	2.986	0.288	2.985	0.301	2.984	0.314	3
4	3.983	0.366	3.982	0.383	3.980	0.401	3.978	0.418	4
5	4.979	0.458	4.977	0.479	4 975	0.501	4.973	0.523	5
6	5.975	0.549	5.972	0.575	5.970	0.601	5.967	0.627	6
7	6.971	0.641	6.968	0.671	6.965	0.701	6.962	0.732	7
8	7.966	0.732	7.963	0.767	7.960	0.802	7.966	0.836	8
9	8.962	0.824	8.959	0.863	8.955	0.902	8.951	0.941	9
10	9.958	0.915	9.954	0.958	9.950	1.002	9.945	1.045	10
11	10.954	1.007	10.949	1.054	10.945	1.102	10.940	1.150	11
12	11.950	1.098	11.945	1.150	11.940	1.202	11.934	1.254	12
13	12.945	1.190	12.940	1.246	12.935	1.302	12.929	1.359	13
14	13.941	1.281	13.936	1.342	13.930	1.403	13.923	1.463	14
15	14.937	1.373	14.931	1.438	14.925	1.503	14.918	1.568	15
16	15.933	1.464	15.926	1.534	15.919	1.603	15.912	1.672	16
17	16.929	1.556	16.922	1.629	16.914	1.703	16.907	1.777	17
18	17.924	1.647	17.917	1.725	17.909	1.803	17.901	1.882	18
19	18.920	1.739	18.913	1.821	18.904	1.904	18,896	1.986	19
20	19.916	1.830	19.908	1.917	19.899	2.004	19.890	2.091	20
21	20.912	1.922	20.903	2.013	20.894	2.104	20.885	2.195	21
22	21.908	2.013	21.899	2.109	21.889	2.204	21.879	2.300	22
23	22.904	2.105	22.894	2.204	22.884	2.304	22.874	2.404	23
24	23.899	2.196	23.890	2.300	23.879	2.405	23.869	2.509	24
25	24.895	2.288	24.885	2.396	24.874	2.505	24.863	2.613	25
26	25.891	2.379	25.880	2.492	25.869	2.605	25.858	2.718	26
27	26.887	2.471	26.876	2.588	26.864	2.705	26.852	2.822	27
28	27.883	2.562	27.871	2.684	27.859	2.805	27.847	2.927	28
29	28.878	2.654	28.866	2.780	28.854	2.905	28.841	3.031	29
30	29.874	2.745	29.862	2.875	29.849	3.006	29.836	3.136	30
31	30.870	2.837	30.857	2.971	30.844	3.106	30.830	3.240	31
32	31.866	2.928	31.853	3.067	31.839	3.206	31.825	3.345	32
33	32.862	3.020	32.848	3.163	32.834	3.306	32.819	3.449	33
34	33.857	3.111	33.843	3.259	33.829	3.406	33.814	3.554	34
35	34.853	3.203	34.839	3.355	34.824	3.507	34.808	3.658	35
36	35.849	3.294	35.834	3.450	35.819	3.607	35.803	3.763	36
37	36.845	3.386	36.830	3.546	36.814	3.707	36.797	3.868	37
38	37.841	3.477	37.825	3.642	37.809	3.807	37.792	3.972	38
39	38.836	3.569	38.820	3.738	38.804	3.907	38.786	4.077	39
40	39.832	3.660	39.816	3.834	39.799	4.008	39.781	4.181	40
41	40.828	3.752	40.811	3.930	40.794	4.108	40.775	4.286	41
42	41.824	3.843	41.807	4.026	41.789	4.208	41.770	4.390	42
43	42.820	3.935	42.802	4.121	42.784	4.308	42.764	4.495	43
44	43.815	4.026	43.797	4.217	43.779	4.408	43.759	4.599	44
45	44.811	4.118	44.793	4.313	44.774	4.508	44.753	4.704	45
46	45.807	4.209	45.788	4.409	45.769	4.609	45.748	4.808	46
47	46.803	4.301	46.784	4.505	46.764	4.709	46.743	4.913	47
48	47.799	4.392	47.779	4.601	47.759	4.809	47.737	5.017	48
49	48.794	4.484	48.774	4.696	48.753	4.909	48.732	5.122	49
50	49.790	4.575	49.770	4.792	49.748	5.009	49.726	5.226	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	84 Degrees.								

Diſt.	5 Degrees.						6 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E.	
51	50.786	4.667	50.765	4.888	50.743	5.110	50.721	5.331	51
52	51.782	4.758	51.761	4.984	51.738	5.210	51.715	5.435	52
53	52.778	4.850	52.756	5.080	52.733	5.310	52.710	5.540	53
54	53.773	4.941	53.751	5.176	53.728	5.410	53.704	5.645	54
55	54.769	5.033	54.747	5.272	54.723	5.510	54.699	5.749	55
56	55.765	5.124	55.742	5.367	55.718	5.611	55.693	5.854	56
57	56.761	5.216	56.738	5.463	56.713	5.711	56.688	5.958	57
58	57.757	5.307	57.733	5.559	57.708	5.811	57.682	6.063	58
59	58.752	5.399	58.728	5.655	58.703	5.911	58.677	6.167	59
60	59.748	5.490	59.724	5.751	59.698	6.011	59.671	6.272	60
61	60.744	5.582	60.719	5.847	60.693	6.111	60.666	6.376	61
62	61.740	5.673	61.715	5.942	61.688	6.212	61.660	6.481	62
63	62.736	5.765	62.710	6.038	62.683	6.312	62.655	6.585	63
64	63.732	5.856	63.705	6.134	63.678	6.412	63.649	6.690	64
65	64.727	5.948	64.701	6.230	64.673	6.512	64.644	6.794	65
66	65.723	6.039	65.696	6.326	65.668	6.612	65.638	6.899	66
67	66.719	6.131	66.692	6.422	66.663	6.713	66.633	7.003	67
68	67.715	6.222	67.687	6.518	67.658	6.813	67.627	7.108	68
69	68.711	6.314	68.682	6.613	68.653	6.913	68.622	7.212	69
70	69.706	6.405	69.678	6.709	69.648	7.013	69.617	7.317	70
71	70.702	6.497	70.673	6.805	70.643	7.113	70.611	7.422	71
72	71.698	6.588	71.669	6.901	71.638	7.214	71.606	7.526	72
73	72.694	6.680	72.664	6.997	72.633	7.314	72.600	7.631	73
74	73.690	6.771	73.659	7.093	73.628	7.414	73.595	7.735	74
75	74.685	6.863	74.655	7.188	74.623	7.514	74.589	7.840	75
76	75.681	6.954	75.650	7.284	75.618	7.614	75.584	7.944	76
77	76.677	7.046	76.646	7.380	76.613	7.714	76.578	8.049	77
78	77.673	7.137	77.641	7.476	77.608	7.815	77.573	8.153	78
79	78.669	7.229	78.636	7.572	78.603	7.915	78.567	8.258	79
80	79.664	7.320	79.632	7.668	79.597	8.015	79.562	8.362	80
81	80.660	7.412	80.627	7.764	80.592	8.115	80.556	8.467	81
82	81.656	7.503	81.622	7.859	81.587	8.215	81.551	8.571	82
83	82.652	7.595	82.618	7.955	82.582	8.316	82.545	8.676	83
84	83.648	7.686	83.613	8.051	83.577	8.416	83.540	8.780	84
85	84.643	7.778	84.609	8.147	84.572	8.516	84.534	8.885	85
86	85.639	7.869	85.604	8.243	85.767	8.616	85.529	8.989	86
87	86.635	7.961	86.599	8.339	86.562	8.716	86.523	9.094	87
88	87.631	8.052	87.595	8.434	87.557	8.817	87.518	9.199	88
89	88.627	8.144	88.590	8.530	88.552	8.917	88.512	9.303	89
90	89.622	8.235	89.586	8.626	89.547	9.017	89.507	9.408	90
91	90.618	8.327	90.581	8.722	90.542	9.117	90.502	9.512	91
92	91.614	8.418	91.576	8.818	91.537	9.217	91.496	9.617	92
93	92.610	8.510	92.572	8.914	92.532	9.317	92.491	9.721	93
94	93.606	8.601	93.567	9.010	93.527	9.418	93.485	9.826	94
95	94.601	8.693	94.563	9.105	94.522	9.518	94.480	9.930	95
96	95.597	8.784	95.558	9.201	95.517	9.618	95.474	10.035	96
97	96.593	8.876	96.553	9.297	96.512	9.718	96.469	10.139	97
98	97.589	8.967	97.549	9.393	97.507	9.818	97.463	10.244	98
99	98.585	9.059	98.544	9.489	98.502	9.919	98.458	10.348	99
100	99.580	9.150	99.540	9.585	99.497	10.019	99.452	10.453	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	84 Degrees.								

Diſt.	6 Degrees.						7 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.994	0.109	0.994	0.113	0.993	0.118	0.993	0.122	1
2	1.988	0.218	1.987	0.226	1.986	0.235	1.985	0.244	2
3	2.982	0.327	2.981	0.340	2.979	0.353	2.978	0.366	3
4	3.976	0.435	3.974	0.453	3.972	0.470	3.970	0.487	4
5	4.970	0.544	4.968	0.566	4.965	0.588	4.963	0.609	5
6	5.964	0.653	5.961	0.679	5.958	0.705	5.955	0.731	6
7	6.958	0.762	6.955	0.792	6.951	0.823	6.948	0.853	7
8	7.952	0.871	7.949	0.906	7.945	0.940	7.940	0.975	8
9	8.946	0.980	8.942	1.019	8.938	1.058	8.933	1.097	9
10	9.941	1.089	9.936	1.132	9.931	1.175	9.925	1.219	10
11	10.935	1.198	10.929	1.245	10.924	1.293	10.918	1.341	11
12	11.929	1.306	11.923	1.358	11.917	1.410	11.911	1.462	12
13	12.923	1.415	12.916	1.472	12.910	1.528	12.903	1.584	13
14	13.917	1.524	13.910	1.585	13.903	1.646	13.896	1.706	14
15	14.911	1.633	14.904	1.698	14.896	1.763	14.888	1.828	15
16	15.905	1.742	15.897	1.811	15.889	1.881	15.881	1.950	16
17	16.899	1.851	16.891	1.924	16.882	1.998	16.873	2.072	17
18	17.893	1.960	17.884	2.038	17.875	2.116	17.866	2.194	18
19	18.887	2.068	18.878	2.151	18.868	2.233	18.858	2.316	19
20	19.881	2.177	19.871	2.264	19.861	2.351	19.851	2.437	20
21	20.875	2.286	20.865	2.377	20.854	2.468	20.843	2.559	21
22	21.869	2.395	21.859	2.490	21.847	2.586	21.836	2.681	22
23	22.863	2.504	22.852	2.604	22.841	2.703	22.829	2.803	23
24	23.857	2.613	23.846	2.717	23.834	2.821	23.821	2.925	24
25	24.851	2.722	24.839	2.830	24.827	2.938	24.814	3.047	25
26	25.845	2.831	25.833	2.943	25.820	3.056	25.806	3.169	26
27	26.840	2.939	26.826	3.056	26.813	3.174	26.799	3.290	27
28	27.834	3.048	27.820	3.170	27.806	3.291	27.791	3.412	28
29	28.828	3.157	28.814	3.283	28.799	3.409	28.784	3.534	29
30	29.822	3.266	29.807	3.396	29.792	3.526	29.776	3.656	30
31	30.816	3.375	30.801	3.509	30.785	3.644	30.769	3.778	31
32	31.810	3.484	31.794	3.623	31.778	3.761	31.761	3.900	32
33	32.804	3.593	32.788	3.736	32.771	3.879	32.754	4.022	33
34	33.798	3.701	33.781	3.849	33.764	3.996	33.747	4.144	34
35	34.792	3.810	34.775	3.962	34.757	4.114	34.739	4.265	35
36	35.786	3.919	35.769	4.075	35.750	4.231	35.732	4.387	36
37	36.780	4.028	36.762	4.189	36.744	4.349	36.724	4.509	37
38	37.774	4.137	37.756	4.302	37.737	4.466	37.717	4.631	38
39	38.768	4.246	38.749	4.415	38.730	4.584	38.709	4.753	39
40	39.762	4.355	39.743	4.528	39.723	4.701	39.702	4.875	40
41	40.756	4.464	40.736	4.641	40.716	4.819	40.694	4.997	41
42	41.750	4.572	41.730	4.755	41.709	4.937	41.687	5.119	42
43	42.744	4.681	42.724	4.868	42.702	5.054	42.679	5.240	43
44	43.738	4.790	43.717	4.981	43.695	5.172	43.672	5.362	44
45	44.733	4.899	44.711	5.094	44.688	5.289	44.665	5.484	45
46	45.727	5.008	45.704	5.207	45.681	5.407	45.657	5.606	46
47	46.721	5.117	46.698	5.321	46.674	5.524	46.650	5.728	47
48	47.715	5.226	47.691	5.434	47.667	5.642	47.642	5.850	48
49	48.709	5.334	48.685	5.547	48.660	5.759	48.635	5.972	49
50	49.703	5.443	49.679	5.660	49.653	5.877	49.627	6.093	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	83 Degrees.								

Dist.	6 Degrees.						7 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.697	5.552	50.672	5.773	50.646	5.994	50.620	6.215	51
52	51.691	5.661	51.666	5.887	51.640	6.112	51.612	6.337	52
53	52.685	5.770	52.659	6.000	52.633	6.229	52.605	6.459	53
54	53.679	5.879	53.653	6.113	53.626	6.347	53.597	6.581	54
55	54.673	5.988	54.646	6.226	54.619	6.465	54.590	6.703	55
56	55.667	6.097	55.640	6.339	55.612	6.582	55.583	6.825	56
57	56.661	6.205	56.634	6.453	56.605	6.700	56.575	6.947	57
58	57.655	6.314	57.627	6.566	57.598	6.817	57.568	7.068	58
59	58.649	6.423	58.621	6.679	58.591	6.935	58.560	7.190	59
60	59.643	6.532	59.614	6.792	59.584	7.052	59.553	7.312	60
61	60.637	6.641	60.608	6.905	60.577	7.170	60.545	7.434	61
62	61.631	6.750	61.601	7.019	61.570	7.287	61.538	7.556	62
63	62.626	6.859	62.595	7.132	62.563	7.405	62.530	7.678	63
64	63.620	6.967	63.589	7.245	63.556	7.522	63.523	7.800	64
65	64.614	7.076	64.582	7.358	64.549	7.640	64.516	7.922	65
66	65.608	7.185	65.576	7.471	65.543	7.757	65.508	8.043	66
67	66.602	7.294	66.569	7.585	66.536	7.875	66.501	8.165	67
68	67.596	7.403	67.563	7.698	67.529	7.993	67.493	8.287	68
69	68.590	7.512	68.556	7.811	68.522	8.110	68.486	8.409	69
70	69.584	7.621	69.550	7.924	69.515	8.228	69.478	8.531	70
71	70.578	7.730	70.544	8.037	70.508	8.345	70.471	8.653	71
72	71.572	7.838	71.537	8.151	71.501	8.463	71.463	8.775	72
73	72.566	7.947	72.531	8.264	72.494	8.580	72.456	8.896	73
74	73.560	8.056	73.524	8.377	73.487	8.698	73.448	9.018	74
75	74.554	8.165	74.518	8.490	74.480	8.815	74.441	9.140	75
76	75.548	8.274	75.511	8.603	75.473	8.933	75.434	9.262	76
77	76.542	8.383	76.505	8.717	76.466	9.050	76.426	9.384	77
78	77.536	8.492	77.499	8.830	77.459	9.168	77.419	9.506	78
79	78.530	8.600	78.492	8.943	78.452	9.285	78.411	9.628	79
80	79.525	8.709	79.486	9.056	79.445	9.403	79.404	9.750	80
81	80.519	8.818	80.479	9.169	80.439	9.521	80.396	9.871	81
82	81.513	8.927	81.473	9.283	81.432	9.638	81.389	9.993	82
83	82.507	9.036	82.466	9.396	82.425	9.756	82.381	10.115	83
84	83.501	9.145	83.460	9.509	83.418	9.873	83.374	10.237	84
85	84.495	9.254	84.454	9.622	84.411	9.991	84.366	10.359	85
86	85.489	9.363	85.447	9.735	85.404	10.108	85.359	10.481	86
87	86.483	9.471	86.441	9.849	86.397	10.226	86.352	10.603	87
88	87.477	9.580	87.434	9.962	87.390	10.343	87.344	10.724	88
89	88.471	9.689	88.428	10.075	88.383	10.461	88.337	10.846	89
90	89.465	9.798	89.421	10.188	89.376	10.578	89.329	10.968	90
91	90.459	9.907	90.415	10.301	90.369	10.696	90.322	11.090	91
92	91.453	10.016	91.409	10.415	91.362	10.813	91.314	11.212	92
93	92.447	10.125	92.402	10.528	92.355	10.931	92.307	11.334	93
94	93.441	10.233	93.396	10.641	93.348	10.049	93.299	11.456	94
95	94.435	10.342	94.389	10.754	94.342	11.166	94.292	11.578	95
96	95.429	10.451	95.383	10.868	95.335	11.284	95.284	11.699	96
97	96.423	10.560	96.376	10.981	96.328	11.401	96.277	11.821	97
98	97.418	10.669	97.370	11.094	97.321	11.519	97.270	11.943	98
99	98.412	10.778	98.364	11.207	98.314	11.636	98.262	12.065	99
100	99.406	10.887	99.357	11.320	99.307	11.754	99.255	12.187	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	83 Degrees.								

Dist.	7 Degrees.						8 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.992	0.126	0.991	0.131	0.991	0.135	0.990	0.139	1
2	1.984	0.252	1.983	0.261	1.982	0.270	1.981	0.278	2
3	2.976	0.379	2.974	0.392	2.973	0.405	2.971	0.418	3
4	3.968	0.505	3.966	0.522	3.963	0.539	3.961	0.557	4
5	4.960	0.631	4.957	0.653	4.954	0.674	4.951	0.696	5
6	5.952	0.757	5.949	0.783	5.945	0.809	5.942	0.835	6
7	6.944	0.883	6.940	0.914	6.936	0.944	6.932	0.974	7
8	7.936	1.010	7.932	1.044	7.927	1.079	7.922	1.113	8
9	8.928	1.136	8.923	1.175	8.918	1.214	8.912	1.253	9
10	9.920	1.262	9.914	1.305	9.909	1.349	9.903	1.392	10
11	10.912	1.388	10.906	1.436	10.900	1.483	10.893	1.531	11
12	11.904	1.514	11.897	1.566	11.890	1.618	11.883	1.670	12
13	12.896	1.641	12.889	1.697	12.881	1.753	12.873	1.809	13
14	13.888	1.767	13.880	1.827	13.872	1.888	13.864	1.948	14
15	14.880	1.893	14.872	1.958	14.863	2.023	14.854	2.088	15
16	15.872	2.019	15.863	2.088	15.854	2.158	15.844	2.227	16
17	16.864	2.145	16.855	2.219	16.845	2.292	16.835	2.366	17
18	17.856	2.272	17.846	2.349	17.836	2.427	17.825	2.505	18
19	18.848	2.398	18.837	2.480	18.826	2.562	18.815	2.644	19
20	19.840	2.524	19.829	2.611	19.817	2.697	19.805	2.783	20
21	20.832	2.650	20.820	2.741	20.808	2.832	20.796	2.923	21
22	21.824	2.776	21.812	2.872	21.799	2.967	21.786	3.062	22
23	22.816	2.903	22.803	3.002	22.790	3.102	22.776	3.201	23
24	23.808	3.029	23.795	3.133	23.781	3.236	23.766	3.340	24
25	24.800	3.155	24.786	3.263	24.772	3.371	24.757	3.479	25
26	25.792	3.281	25.778	3.394	25.763	3.506	25.747	3.618	26
27	26.784	3.407	26.769	3.524	26.753	3.641	26.737	3.758	27
28	27.776	3.534	27.760	3.655	27.744	3.776	27.728	3.897	28
29	28.768	3.660	28.752	3.785	28.735	3.911	28.718	4.036	29
30	29.760	3.786	29.743	3.916	29.726	4.046	29.708	4.175	30
31	30.752	3.912	30.735	4.046	30.717	4.180	30.698	4.314	31
32	31.744	4.038	31.726	4.177	31.708	4.315	31.689	4.454	32
33	32.736	4.165	32.718	4.307	32.699	4.450	32.679	4.593	33
34	33.728	4.291	33.709	4.438	33.689	4.585	33.669	4.732	34
35	34.720	4.417	34.701	4.568	34.680	4.720	34.659	4.871	35
36	35.712	4.543	35.692	4.699	35.671	4.855	35.650	5.010	36
37	36.704	4.669	36.683	4.829	36.662	4.989	36.640	5.149	37
38	37.696	4.796	37.675	4.960	37.653	5.124	37.630	5.289	38
39	38.688	4.922	38.666	5.091	38.644	5.259	38.620	5.428	39
40	39.680	5.048	39.658	5.221	39.635	5.394	39.611	5.567	40
41	40.672	5.174	40.649	5.352	40.626	5.529	40.601	5.706	41
42	41.664	5.300	41.641	5.482	41.616	5.664	41.591	5.845	42
43	42.656	5.427	42.632	5.613	42.607	5.799	42.582	5.984	43
44	43.648	5.553	43.624	5.743	43.598	5.933	43.572	6.124	44
45	44.640	5.679	44.615	5.874	44.589	6.068	44.562	6.263	45
46	45.632	5.805	45.606	6.004	45.580	6.203	45.552	6.402	46
47	46.624	5.931	46.598	6.135	46.571	6.338	46.543	6.541	47
48	47.616	6.058	47.589	6.265	47.562	6.473	47.533	6.680	48
49	48.608	6.184	48.581	6.396	48.552	6.608	48.523	6.819	49
50	49.600	6.310	49.572	6.526	49.543	6.743	49.513	6.959	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	82 Degrees.								

Dist.	7 Degrees.						8 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.592	6.436	50.564	6.657	50.534	6.877	50.504	7.098	51
52	51.584	6.562	51.555	6.787	51.525	7.012	51.494	7.237	52
53	52.576	6.689	52.547	6.918	52.516	7.147	52.484	7.376	53
54	53.568	6.815	53.538	7.048	53.507	7.282	53.474	7.515	54
55	54.560	6.941	54.529	7.179	54.498	7.417	54.465	7.655	55
56	55.552	7.067	55.521	7.309	55.488	7.552	55.455	7.794	56
57	56.544	7.193	56.512	7.440	56.479	7.687	56.445	7.933	57
58	57.536	7.320	57.504	7.571	57.470	7.821	57.436	8.072	58
59	58.528	7.446	58.495	7.701	58.461	7.956	58.426	8.211	59
60	59.520	7.572	59.487	7.832	59.452	8.091	59.416	8.350	60
61	60.512	7.698	60.478	7.962	60.443	8.226	60.406	8.490	61
62	61.504	7.824	61.470	8.093	61.434	8.361	61.397	8.629	62
63	62.496	7.951	62.461	8.223	62.425	8.496	62.387	8.768	63
64	63.488	8.077	63.452	8.354	63.415	8.630	63.377	8.907	64
65	64.480	8.203	64.444	8.484	64.406	8.765	64.367	9.046	65
66	65.472	8.329	65.435	8.615	65.397	8.900	65.358	9.185	66
67	66.464	8.455	66.427	8.745	66.388	9.035	66.348	9.325	67
68	67.456	8.582	67.418	8.876	67.379	9.170	67.338	9.464	68
69	68.448	8.708	68.410	9.006	68.370	9.305	68.328	9.603	69
70	69.440	8.834	69.401	9.137	69.361	9.440	69.319	9.742	70
71	70.432	8.960	70.393	9.267	70.351	9.574	70.309	9.881	71
72	71.424	9.086	71.384	9.398	71.342	9.709	71.299	10.020	72
73	72.416	9.213	72.375	9.528	72.333	9.844	72.290	10.160	73
74	73.408	9.339	73.367	9.659	73.324	9.979	73.280	10.299	74
75	74.400	9.465	74.358	9.789	74.315	10.114	74.270	10.438	75
76	75.392	9.591	75.350	9.920	75.306	10.249	75.260	10.577	76
77	76.384	9.717	76.341	10.051	76.297	10.384	76.251	10.716	77
78	77.376	9.844	77.333	10.181	77.288	10.518	77.241	10.855	78
79	78.368	9.970	78.324	10.312	78.278	10.653	78.231	10.995	79
80	79.360	10.096	79.316	10.442	79.269	10.788	79.221	11.134	80
81	80.352	10.222	80.307	10.573	80.260	10.923	80.212	11.273	81
82	81.344	10.348	81.298	10.703	81.251	11.058	81.202	11.412	82
83	82.336	10.475	82.290	10.834	82.242	11.193	82.192	11.551	83
84	83.328	10.601	83.281	10.964	83.233	11.327	83.183	11.691	84
85	84.320	10.727	84.273	11.095	84.224	11.462	84.173	11.830	85
86	85.312	10.853	85.264	11.225	85.214	11.597	85.163	11.969	86
87	86.304	10.979	86.256	11.356	86.205	11.732	86.153	12.108	87
88	87.296	11.106	87.247	11.486	87.196	11.867	87.144	12.247	88
89	88.288	11.232	88.239	11.617	88.187	12.002	88.134	12.386	89
90	89.280	11.358	89.230	11.747	89.178	12.137	89.124	12.526	90
91	90.272	11.484	90.221	11.878	90.169	12.271	90.114	12.665	91
92	91.264	11.610	91.213	12.008	91.160	12.406	91.105	12.804	92
93	92.256	11.737	92.204	12.139	92.151	12.541	92.095	12.943	93
94	93.248	11.863	93.196	12.269	93.141	12.676	93.085	13.082	94
95	94.240	11.989	94.187	12.400	94.132	12.811	94.075	13.221	95
96	95.232	12.115	95.179	12.530	95.123	12.946	95.066	13.361	96
97	96.224	12.241	96.170	12.611	96.114	13.081	96.056	13.500	97
98	97.216	12.368	97.162	12.792	97.105	13.215	97.046	13.639	98
99	98.208	12.494	98.153	12.922	98.096	13.350	98.037	13.778	99
100	99.200	12.620	99.144	13.053	99.087	13.485	99.027	13.917	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	82 Degrees.								

Diſt.	8 Degrees.						9 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.990	0.143	0.989	0.148	0.988	0.152	0.988	0.156	1
2	1.979	0.287	1.978	0.296	1.977	0.304	1.975	0.313	2
3	2.969	0.430	2.967	0.443	2.965	0.456	2.963	0.469	3
4	3.959	0.574	3.956	0.591	3.953	0.608	3.951	0.626	4
5	4.948	0.717	4.945	0.739	4.942	0.761	4.938	0.782	5
6	5.938	0.861	5.934	0.887	5.930	0.913	5.926	0.939	6
7	6.928	1.004	6.923	1.035	6.919	1.065	6.914	1.095	7
8	7.917	1.148	7.912	1.182	7.907	1.217	7.902	1.251	8
9	8.907	1.291	8.901	1.330	8.895	1.369	8.889	1.408	9
10	9.897	1.435	9.890	1.478	9.884	1.521	9.877	1.564	10
11	10.886	1.578	10.879	1.626	10.872	1.673	10.865	1.721	11
12	11.876	1.722	11.868	1.774	11.860	1.825	11.852	1.877	12
13	12.865	1.865	12.857	1.922	12.849	1.978	12.840	2.034	13
14	13.855	2.009	13.846	2.069	13.837	2.130	13.828	2.190	14
15	14.845	2.152	14.835	2.217	14.825	2.282	14.815	2.347	15
16	15.834	2.296	15.824	2.365	15.814	2.434	15.803	2.503	16
17	16.824	2.439	16.813	2.513	16.802	2.586	16.791	2.659	17
18	17.814	2.583	17.802	2.661	17.791	2.738	17.778	2.816	18
19	18.803	2.726	18.791	2.808	18.779	2.890	18.766	2.972	19
20	19.793	2.870	19.780	2.956	19.767	3.042	19.754	3.129	20
21	20.783	3.013	20.769	3.104	20.755	3.195	20.741	3.285	21
22	21.772	3.157	21.758	3.252	21.744	3.347	21.729	3.442	22
23	22.762	3.300	22.747	3.400	22.732	3.499	22.717	3.598	23
24	23.752	3.444	23.736	3.547	23.721	3.651	23.705	3.754	24
25	24.741	3.587	24.725	3.695	24.709	3.803	24.692	3.911	25
26	25.731	3.731	25.714	3.843	25.697	3.955	25.680	4.067	26
27	26.721	3.874	26.703	3.991	26.686	4.107	26.668	4.224	27
28	27.710	4.018	27.692	4.139	27.674	4.259	27.655	4.380	28
29	28.700	4.161	28.681	4.286	28.662	4.412	28,643	4.537	29
30	29.690	4.305	29.670	4.434	29.651	4.564	29.631	4.693	30
31	30.679	4.448	30.659	4.582	30.639	4.716	30.618	4.849	31
32	31.669	4.592	31.649	4.730	31.628	4.868	31.606	5.006	32
33	32.658	4.735	32.638	4.878	32.616	5.020	32.594	5.162	33
34	33.648	4.879	33.627	5.026	33.604	5.172	33.581	5.319	34
35	34.638	5.022	34.616	5.173	34.593	5.324	34.569	5.475	35
36	35.627	5.166	35.605	5.321	35.581	5.476	35.557	5.632	36
37	36.617	5.309	36.594	5.469	36.569	5.620	36.544	5.788	37
38	37.607	5.453	37.583	5 617	37.558	5.781	37.532	5.945	38
39	38.596	5.596	38.572	5.765	38.546	5.933	38.520	6,101	39
40	39.586	5.740	39.561	5.912	39.534	6.085	39.508	6.257	40
41	40.576	5.883	40.550	6.060	40.523	6,237	40.495	6.414	41
42	41.565	6,027	41.539	6,208	41,511	6.389	41.483	6.570	42
43	42.555	6,170	42.528	6.356	42.500	6.541	42.471	6.727	43
44	43.545	6,314	43.517	6.504	43.488	6.693	43.458	6.883	44
45	44.531	6.457	44.506	6.651	44.476	6.846	44.446	7.040	45
46	45.524	6.601	45.495	6.799	45.465	6.998	45.434	7.196	46
47	46.514	6.744	46.484	6.947	46.453	7.150	46.421	7.352	47
48	47.503	6.888	47.473	7.095	47.441	7.302	47.409	7.509	48
49	48.493	7.031	48.462	7.243	48.430	7.454	48.397	7.665	49
50	49.483	7.175	49.451	7.390	49.418	7.606	49.384	7.822	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	81 Degrees.								

Diſt.	8 Degrees.						9 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.472	7.318	50.440	7.538	50.406	7.758	50.372	7.978	51
52	51.462	7.462	51.429	7.686	51.395	7.910	51.360	8.135	52
53	52.452	7.605	52.418	7.834	52.383	8.063	52.347	8.291	53
54	53.441	7.749	53.407	7.982	53.372	8.215	53.335	8.447	54
55	54.431	7.892	54.396	8.130	54.360	8.367	54.323	8.604	55
56	55.420	8.036	55.385	8.277	55.348	8.519	55.311	8.760	56
57	56.410	8.179	56.374	8.425	56.337	8.671	56.298	8.917	57
58	57.400	8.323	57.363	8.573	57.325	8.823	57.286	9.073	58
59	58.389	8.466	58.352	8.721	58.313	8.975	58.274	9.930	59
60	59.379	8.610	59.341	8.868	59.302	9.127	59.261	9.386	60
01	60.369	8.753	60.330	9.016	60.290	9.280	60.249	9.543	61
62	61.358	8.897	61.319	9.164	61.278	9.432	61.237	9.699	62
63	62.348	9.040	62.308	9.312	62.267	9.584	62.224	9.855	63
64	63.338	9.184	63.297	9.460	63.255	9.736	63.212	10.012	64
65	64.327	9.327	64.286	9.608	64.243	9.888	64.200	10.168	65
66	65.317	9.471	65.275	9.755	65.232	10.040	65.187	10.325	66
67	66.307	9.614	66.264	9.903	66.220	10.192	66.175	10.481	67
68	67.296	9.757	67.253	10.051	67.209	10.344	67.163	10.638	68
69	68.286	9.901	68.242	10.199	68.197	10.497	68.150	10.794	69
70	69.276	10.044	69.231	10.347	69.185	10.649	69.138	10.950	70
71	70.265	10.188	70.220	10.494	70.174	10.801	70.126	11.107	71
72	71.255	10.331	71.209	10.642	71.162	10.953	71.114	11.263	72
73	72.245	10.475	72.198	10.790	72.150	11.105	72.101	11.420	73
74	73.234	10.618	73.187	10.938	73.139	11.257	73.089	11.576	74
75	74.224	10.762	74.176	11.086	74.127	11.409	74.077	11.733	75
76	75.214	10.905	75.165	11.234	75.115	11.561	75.064	11.889	76
77	76.203	11.049	76.154	11.381	76.104	11.714	76.052	12.045	77
78	77.193	11.192	77.143	11.529	77.092	11.866	77.040	12.202	78
79	78.182	11.336	78.132	11.677	78.081	12.018	78.027	12.358	79
80	79.172	11.479	79.121	11.825	79.069	12.170	79.015	12.515	80
81	80.162	11.623	80.110	11.973	80.057	12.322	80.003	12.671	81
82	81.151	11.766	81.099	12.120	81.046	12.474	80.990	12.828	82
83	82.141	11.910	82.088	12.268	82.034	12.626	81.978	12.984	83
84	83.131	12.053	83.077	12.416	83.022	12.778	82.966	13.140	84
85	84.120	12.197	84.066	12.564	84.011	12.930	83.954	13.297	85
86	85.110	12.340	85.055	12.712	84.999	13.083	84.941	13.453	86
87	86.100	12.484	86.044	12.859	85.987	13.235	85.929	13.610	87
88	87.089	12.627	87.033	13.007	86.976	13.387	86.917	13.766	88
89	88.079	12.771	88.022	13.155	87.964	13.539	87.904	13.923	89
90	89.069	12.914	89.011	13.303	88.953	13.691	88.892	14.079	90
91	90.058	13.058	90.000	13.451	89.941	13.843	89.880	14.236	91
92	91.048	13.201	90.989	13.598	90.929	13.995	90.867	14.392	92
93	92.038	13.345	91.978	13.746	91.918	14.147	91.855	14.548	93
94	93.027	13.488	92.968	13.894	92.906	14.300	92.843	14.705	94
95	94.017	13.632	93.957	14.042	93.894	14.452	93.830	14.861	95
96	95.007	13.775	94.946	14.190	94.883	14.604	94.818	15.018	96
97	95.996	13.919	95.935	14.338	95.871	14.756	95.806	15.174	97
98	96.986	14.062	96.924	14.485	96.859	14.908	96.793	15.331	98
99	97.975	14.206	97.913	14.633	97.848	15.06[illegible]	97.781	15.487	99
100	98.965	14.349	98.902	14.781	98.836	15.212	98.769	15.643	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	81 Degrees.								

Dist.	9 Degrees.						10 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.987	0.161	0.986	0.165	0.986	0.169	0.985	0.174	1
2	1.974	0.321	1.973	0.330	1.971	0.339	1.970	0.347	2
3	2.961	0.482	2.959	0.495	2.957	0.508	2.954	0.521	3
4	3.948	0.643	3.945	0.660	3.942	0.677	3.939	0.695	4
5	4.935	0.804	4.931	0.825	4.928	0.847	4.924	0.868	5
6	5.922	0.964	5.918	0.990	5.913	1.016	5.909	1.042	6
7	6.909	1.125	6.904	1.155	6.899	1.185	6.894	1.216	7
8	7.896	1.286	7.890	1.320	7.884	1.355	7.878	1.389	8
9	8.883	1.447	8.877	1.485	8.870	1.524	8.863	1.563	9
10	9.870	1.607	9.863	1.650	9.856	1.693	9.848	1.736	10
11	10.857	1.768	10.849	1.816	10.841	1.863	10.833	1.910	11
12	11.844	1.929	11.835	1.981	11.827	2.032	11.818	2.084	12
13	12.831	2.090	12.822	2.146	12.812	2.202	12.803	2.257	13
14	13.818	2.250	13.808	2.311	13.798	2.371	13.787	2.431	14
15	14.805	2.411	14.794	2.476	14.783	2.540	14.772	2.605	15
16	15.792	2.572	15.781	2.641	15.769	2.710	15.757	2.778	16
17	16.779	2.733	16.767	2.806	16.754	2.879	16.742	2.952	17
18	17.766	2.893	17.753	2.971	17.740	3.048	17.727	3.126	18
19	18.753	3.054	18.739	3.136	18.726	3.218	18.711	3.299	19
20	19.740	3.215	19.726	3.301	19.711	3.387	19.696	3.473	20
21	20.727	3.376	20.712	3.466	20.697	3.556	20.681	3.647	21
22	21.714	3.536	21.698	3.631	21.682	3.726	21.666	3.820	22
23	22.701	3.697	22.685	3.796	22.668	3.894	22.651	3.994	23
24	23.688	3.858	23.671	3.961	23.653	4.064	23.635	4.168	24
25	24.675	4.019	24.657	4.126	24.639	4.234	24.620	4.341	25
26	25.662	4.179	25.643	4.291	25.624	4.403	25.605	4.515	26
27	26.649	4.340	26.630	4.456	26.610	4.572	26.590	4.689	27
28	27.636	4.501	27.616	4.621	27.596	4.742	27.575	4.862	28
29	28.623	4.662	28.602	4.786	28.581	4.911	28.559	5.036	29
30	29.610	4.822	29.589	4.951	29.567	5.080	29.544	5.209	30
31	30.597	4.983	30.575	5.116	30.552	5.250	30.529	5.383	31
32	31.584	5.144	31.561	5.282	31.538	5.419	31.514	5.557	32
33	32.571	5.305	32.547	5.447	32.523	5.589	32.499	5.730	33
34	33.558	5.465	33.534	5.612	33.509	5.758	33.483	5.904	34
35	34.545	5.626	34.520	5.777	34.494	5.927	34.468	6.078	35
36	35.532	5.787	35.506	5.942	35.480	6.097	35.453	6.251	36
37	36.519	5.947	36.493	6.107	36.466	6.266	36.438	6.425	37
38	37.506	6.108	37.479	6.272	37.451	6.435	37.423	6.599	38
39	38.493	6.269	38.465	6.437	38.437	6.604	38.408	6.772	39
40	39.480	6.430	39.451	6.602	39.422	6.774	39.392	6.946	40
41	40.467	6.590	40.438	6.767	40.408	6.943	40.377	7.120	41
42	41.454	6.751	41.424	6.932	41.393	7.113	41.362	7.293	42
43	42.441	6.912	42.410	6.097	42.379	7.282	42.347	7.467	43
44	43.428	7.073	43.397	7.262	43.364	7.451	43.332	7.641	44
45	44.415	7.233	44.383	7.427	44.350	7.621	44.316	7.814	45
46	45.402	7.394	45.369	7.592	45.336	7.790	45.301	7.988	46
47	46.389	7.555	46.355	7.757	46.321	7.959	46.286	8.161	47
48	47.376	7.716	47.342	7.922	47.307	8.129	47.271	8.335	48
49	48.363	7.876	48.328	8.087	48.292	8.298	48.256	8.509	49
50	49.350	8.037	49.314	8.252	49.278	8.467	49.240	8.682	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	80 Degrees.								

Dist.	9 Degrees.						10 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.337	8,198	50.301	8.417	50.263	8.637	50.225	8.856	51
52	51.324	8.359	51.287	8.582	51.249	8.806	51.210	9.030	52
53	52.311	8.519	52.273	8.748	52.234	8.976	52.195	9.203	53
54	53.298	8.680	53.259	8.913	53.220	9.145	53.180	9.377	54
55	54.285	8.841	54.246	9.078	54.206	9.314	54.164	9.551	55
56	55.272	9.002	55.232	9.243	55.191	9.484	55.149	9.724	56
57	56.259	9.162	56.218	9.408	56.177	9.653	56.134	9.898	57
58	57.246	9.323	57.205	9.573	57.162	9.822	57.119	10.072	58
59	58.233	9.484	58.191	9.738	58.148	9.992	58.104	10.245	59
60	59.220	9.645	59.177	9.903	59.133	10.161	59.088	10.419	60
61	60.207	9.805	60.163	10.068	60.119	10.330	60.073	10.593	61
62	61.194	9.966	61.150	10.233	61.104	10.500	61.058	10.766	62
63	62.181	10.127	62.136	10.398	62.090	10.669	62.043	10.940	63
64	63.168	10.288	63.122	10.563	63.076	10.838	63.028	11.113	64
65	64.155	10.448	64.109	10.728	64.061	11,008	64.013	11.287	65
66	65.142	10.609	65.095	10.893	65.047	11.177	64.997	11.461	66
67	66.129	10.770	66.081	11.058	66.032	11.346	65.982	11.634	67
68	67.116	10.930	67.067	11.223	67.018	11,516	66.967	11.808	68
69	68.103	11.091	68.054	11.388	68.003	11.685	67.952	11.982	69
70	69.090	11.252	69.040	11.553	68.989	11.854	68.937	12.155	70
71	70.077	11.413	70.026	11.718	69.974	12.024	69.921	12.329	71
72	71.064	11.573	71.013	11.883	70.960	12.193	70.906	12.503	72
73	72.051	11.734	71.999	12.048	71.946	12.363	71.891	12.676	73
74	73.038	11.895	72.985	12.214	72.931	12.532	72.876	12.850	74
75	74.025	12.056	73.971	12.379	73.917	12.701	73.861	13.024	75
76	75.012	12.216	74.958	12.544	74.902	12.871	74.845	13.197	76
77	75.999	12.377	75.944	12.709	75.888	13.040	75.830	13.371	77
78	76.986	12.538	76.930	12.874	76.873	13.209	76.815	13.545	78
79	77.973	12.699	77.917	13.039	77.859	13.379	77.800	13.718	79
80	78.960	12.859	78.903	13.204	78.844	13.548	78.785	13.892	80
81	79.947	13.020	79.889	13.369	79.830	13.717	79.769	14.066	81
82	80.934	13.181	80.875	13.534	80.816	13.887	80,754	14.239	82
83	81.921	13.342	81.862	13.699	81.801	14.056	81.739	14.413	83
84	82.908	13.502	82.848	13.864	82.787	14.225	82.724	14.586	84
85	83.895	13.663	83.834	14.029	83.772	14.395	83.709	14.760	85
86	84.882	13.824	84.821	14.194	84.758	14.564	84.693	14.934	86
87	85.869	13.985	85.807	14.359	85.743	14.733	85.678	15.107	87
88	86.856	14.145	86.793	14.524	86.729	14.903	86.663	15.281	88
89	87.843	14.306	87.779	14.689	87.714	15.072	87.648	15.455	89
90	88.830	14.467	88.766	14.854	88.700	15.241	88.633	15.628	90
91	89.817	14.628	89.752	15.019	89.686	15.411	89.618	15.802	91
92	90.804	14.788	90.738	15.184	90,671	15.580	90.602	15.976	92
93	91.791	14.949	91.725	15.349	91,657	15.750	91.587	16.149	93
94	92.778	15.110	92.711	15.514	92.642	15.919	92.572	16.323	94
95	93.765	15.271	93.697	15.680	93.628	16.088	93.557	16.497	95
96	94.752	15.431	94.683	15.845	94.613	16.258	94.542	16.670	96
97	95.739	15.592	95.670	16.010	95.599	16.427	95.526	16.844	97
98	96.726	15.753	96.656	16.175	96.584	16.596	96.511	17.018	98
99	97.713	15.914	97.642	16.340	97.570	16.766	97.496	17.191	99
100	98.700	16.074	98.629	16.505	98.556	16.935	98.481	17.365	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	80 Degrees.								

Dist.	10 Degrees.						11 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.984	0.178	0.983	0.182	0.982	0.186	0.982	0.191	1
2	1.968	0.356	1.967	0.364	1.965	0.373	1.963	0.383	2
3	2.952	0.534	2.950	0.547	2.947	0.560	2.945	0.572	3
4	3.936	0.712	3.933	0.729	3.930	0.746	3.927	0.763	4
5	4.920	0.890	4.916	0.911	4.912	0.933	4.908	0.954	5
6	5.904	1.068	5.900	1.093	5.895	1.119	5.890	1.145	6
7	6.888	1.246	6.883	1.276	6.877	1.306	6.871	1.336	7
8	7.872	1.424	7.866	1.458	7.860	1.492	7.853	1.526	8
9	8.856	1.601	8.849	1.640	8.842	1.679	8.835	1.717	9
10	9.840	1.779	9.833	1.822	9.825	1.865	9.816	1.908	10
11	10.824	1.957	10.816	2.005	10.807	2.052	10.798	2.099	11
12	11.808	2.135	11.799	2.187	11.789	2.238	11.780	2.290	12
13	12.792	2.313	12.782	2.369	12.772	2.425	12.761	2.481	13
14	13.777	2.491	13.766	2.551	13.754	2.611	13.743	2.671	14
15	14.761	2.669	14.749	2.734	14.737	2.798	14.724	2.862	15
16	15.745	2.847	15.732	2.916	15.719	2.984	15.706	3.053	16
17	16.729	3.025	16.715	3.098	16.702	3.171	16.688	3.244	17
18	17.713	3.203	17.699	3,280	17.684	3.357	17.669	3.435	18
19	18.697	3.381	18.682	3.462	18.667	3.544	18.651	3.625	19
20	19.681	3.559	19.665	3.645	19.649	3.730	19.633	3.816	20
21	20.665	3.737	20.648	3.827	20.631	3.917	20.614	4.007	21
22	21,649	3.915	21.632	4.009	21.614	4.104	21.596	4.198	22
23	22.633	4.093	22.615	4.191	22.596	4.290	22.577	4.389	23
24	23.617	4.271	23.598	4.374	23.579	4.477	23.559	4.579	24
25	24.601	4.449	24.581	4.556	24.561	4.663	24.541	4.770	25
26	25.585	4.627	25.565	4.738	25.544	4.850	25.522	4.961	26
27	26.569	4.804	26.548	4.920	26.526	5.036	26.504	5.152	27
28	27.553	4.982	27.531	5.103	27.509	5.223	27.486	5.343	28
29	28.537	5.160	28.514	5.285	28.491	5.409	28.467	5.533	29
30	29.521	5.338	29.498	5.467	29.474	5.596	29.449	5.724	30
31	30.505	5.516	30.481	5.649	30.456	5.782	30.430	5.915	31
32	31.489	5.694	31.464	5.832	31.438	5.969	31.412	6.106	32
33	32.473	5.872	32.447	6.014	32.421	6.155	32.394	6.297	33
34	33.457	6.050	33.431	6.196	33.403	6.348	33.375	6.488	34
35	34.441	6.228	34.414	6.378	34.386	6.528	34.357	6.678	35
36	35.425	6.406	35.397	6.560	35.368	6.715	35.338	6.869	36
37	36.410	6.584	36.380	6.743	36.351	6.901	36.320	7.060	37
38	37.394	6.762	37.364	6.925	37.333	7.088	37.302	7.251	38
39	38.378	6.940	38.347	7.107	38.316	7.274	38.283	7.441	39
40	39.362	7.118	39.330	7.289	39.298	7.461	39.265	7.632	40
41	40.346	7.296	40.313	7.472	40.280	7.647	40.247	7.823	41
42	41.330	7.474	41.297	7.654	41.263	7.834	41.228	8.014	42
43	42.314	7.652	42.280	7.836	42.245	8.021	42.210	8.205	43
44	43.298	7.830	43.263	8.018	43.228	8.207	43.192	8.396	44
45	44.282	8.007	44.246	8.201	44.210	8.394	44.173	8.586	45
46	45.266	8.185	45.230	8.383	45.193	8.580	45.155	8.777	46
47	46.250	8.363	46.213	8.565	46.175	8.767	46.136	8.968	47
48	47.234	8.541	47.196	8.747	47.158	8.953	47.118	9.159	48
49	48.218	8.719	48.179	8.930	48.140	9.140	48.100	9.350	49
50	49.202	8.897	49.163	9.112	49.123	9.326	49.081	9.540	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	79 Degrees.								

Dist.	10 Degrees.						11 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.186	9.075	50.146	9.294	50.105	9.513	50.063	9.731	51
52	51.170	9.253	51.129	9.476	51.087	9.699	51.045	9.922	52
53	52.154	9.431	52.113	9.658	52.070	9.886	52.026	10.113	53
54	53.138	9.609	53.096	9.841	53.052	10.072	53.008	10.304	54
55	54.122	9.787	54.079	10.023	54.035	10.259	63.989	10.494	55
56	55.106	9.965	55.062	10.205	55.017	10.445	54.971	10.685	56
57	56.090	10.143	56.046	10.387	56.000	10.632	55.953	10.876	57
58	57.074	10.321	57.029	10.570	56.982	10.818	56.934	11.067	58
59	58.058	10.499	58.012	10.752	57.965	11.005	57.916	11.258	59
60	59.042	10.677	58.995	10.934	58.947	11.191	58.898	11.449	60
61	60.026	10.855	59.979	11.116	59.929	11.378	59.879	11.639	61
62	61.011	11.032	60.962	11.299	60.912	11.564	60.861	11.830	62
63	61.995	11.210	61.945	11.481	61.894	11.751	61.843	12.021	63
64	62.979	11.388	62.928	11.663	62.877	11.938	62.824	12.212	64
65	63.963	11.566	63.912	11.845	63.859	12.124	63.806	12.403	65
66	64.947	11.744	64.895	12.028	64.842	12.311	64.787	12.593	66
67	65.931	11.922	65.878	12.210	65.824	12.497	65.769	12.784	67
68	66.915	12.100	66.861	12.392	66.807	12.684	66.751	12.975	68
69	67.899	12.278	67.845	12.574	67.789	12.870	67.732	13.166	69
70	68.883	12.456	68 828	12.756	68.772	13.057	68.714	13.357	70
71	69.867	12.634	69.811	12.939	69.754	13.243	69.696	13.547	71
72	70.851	12.812	70.794	13.121	70.736	13.430	70.677	13.738	72
73	71.835	12.990	71.778	13.303	71.719	13.616	71.659	13.929	73
74	72.819	13.168	72.761	13.485	72.701	13.803	72.640	14.120	74
75	73.803	13.346	73.744	13.668	73 684	13.989	73.622	14.311	75
76	74.787	13.524	74.727	13.850	74.666	14.176	74.604	14.501	76
77	75.771	13.702	75.711	14.032	75.649	14.362	75.585	14.692	77
78	76.755	13.880	76.694	14.214	76.631	14.549	76.567	14.883	78
79	77.739	14.058	77.677	14.397	77.614	14.735	77.549	15.074	79
80	78.723	14.235	78.660	14.579	78.596	14.922	78.530	15.265	80
81	79.707	14.413	79.644	14.761	79.578	15.108	79.512	15.456	81
82	80.691	14.591	80.627	14.943	80.561	15.295	80.493	15.646	82
83	81.675	14.769	81.610	15.126	81.543	15.481	81.475	15.837	83
84	82.659	14.947	82.593	15.308	82.526	15.668	82.457	16.028	84
85	83.643	15.125	83.577	15.490	83.508	15.855	83 438	16.219	85
86	84.628	15.303	84.560	15.672	84.491	16.041	84.420	16.410	86
87	85.612	15.481	85.543	15.854	85.473	16.228	85.402	16.600	87
88	86.596	15.659	86.526	16.037	86.456	16.414	86.383	16.791	88
89	87.580	15.837	87.510	16.219	87.438	16.601	87.365	16.982	89
90	88.564	16.015	88 493	16.401	88.421	16.787	88.346	17.173	90
91	89.548	16.193	89.476	16.583	89.403	16.974	89.328	17.364	91
92	90.532	16.371	90.459	16.766	90.385	17.160	90.310	17.554	92
93	91.516	16.549	91.443	16.948	91.368	17.347	91.291	17.745	93
94	92.500	16.727	92.426	17.130	92.350	17.533	92.273	17.936	94
95	93.484	16.905	93.409	17.312	93.333	17.720	93.255	18.127	95
96	94.468	17.083	94.392	17.495	94.315	17.906	94.236	18.318	96
97	95.452	17.261	95.376	17.677	95.298	18.093	95.218	18.508	97
98	96.436	17.438	96.359	17.859	96.280	18.279	96.199	18.699	98
99	97.420	17.616	97.342	18.041	97.263	18.466	97.181	18.891	99
100	98.404	17.794	98.325	18.224	98.245	18.652	98.163	19.081	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	79 Degrees.								

Diſt.	11 Degrees.						12 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.981	0.195	0.980	0.199	0.979	0.204	0.978	0.208	1
2	1.962	0.390	1.960	0.399	1.958	0.407	1.956	0.416	2
3	2.942	0.585	2.940	0.598	2.937	0.611	2.934	0.624	3
4	3.923	0.780	3.920	0.797	3.916	0.815	3.913	0.832	4
5	4.904	0.975	4.900	0.997	4.895	1.018	4.891	1.040	5
6	5.885	1.171	5.880	1.196	5.874	1.222	5.869	1.247	6
7	6.865	1.366	6.859	1.396	6.853	1.429	6.847	1.455	7
8	7.846	1.561	7.839	1.595	7.832	1.625	7.825	1.663	8
9	8.827	1.756	8.819	1.794	8.811	1.833	8.803	1.871	9
10	9.808	1.951	9.799	1.994	9.790	2.036	9.781	2.079	10
11	10.789	2.146	10.779	2.193	10.770	2.240	10.760	2.287	11
12	11.769	2.341	11.759	2.392	11.749	2.444	11.738	2.495	12
13	12.750	2.536	12.739	2.592	12.728	2.647	12.716	2.703	13
14	13.731	2.731	13.719	2.791	13.707	2.851	13.694	2.911	14
15	14.712	2.926	14.699	2.991	14.686	3.055	14.672	3.119	15
16	15.693	3.121	15.679	3.190	15.665	3.258	15.650	3.327	16
17	16.673	3.317	16.659	3.389	16.644	3.462	16.629	3.534	17
18	17.654	3.512	17.639	3.589	17.623	3.666	17.607	3.742	18
19	18.635	3.707	18.619	3.788	18.602	3.869	18.585	3.950	19
20	19.616	3.902	19.598	3.987	19.581	4.073	19.563	4.158	20
21	20.596	4.097	20.578	4.187	20.560	4.276	20.541	4.366	21
22	21.577	4.292	21.558	4.386	21.539	4.480	21.519	4.574	22
23	22.558	4.487	22.538	4.585	22.518	4.684	22.497	4.782	23
24	23.539	4.682	23.518	4.785	23 497	4.887	23.476	4.990	24
25	24.520	4.877	24.498	4.984	24.476	5.091	24.454	5.198	25
26	25.500	5.072	25.478	5.184	25.455	5.295	25.432	5.406	26
27	26.481	5.267	26.458	5.383	26.434	5.498	26.410	5.614	27
28	27.462	5.463	27.438	5.582	27.413	5.702	27.388	5.822	28
29	28.443	5.658	28.418	5.782	28.392	5.906	28.366	6.029	29
30	29.424	5.853	29.398	5.981	29.371	6.109	29.344	6.237	30
31	30.404	6.048	30.378	6.180	30.350	6.313	30.323	6.445	31
32	31.385	6.243	31.358	6.380	31.329	6.517	31.301	6.653	32
33	32.366	6.438	32.338	6.579	32.309	6.720	32.279	6.861	33
34	33.347	6.633	33 317	6.779	33.288	6.924	33.257	7.069	34
35	34.327	6.828	34.297	6.978	34.267	7.127	34.235	7.277	35
36	35.308	7.023	35.277	7.177	35.246	7.331	35.213	7.485	36
37	36.289	7.218	36.257	7.377	36.225	7.535	36.191	7.693	37
38	37.270	7.413	37.237	7.576	37.204	7.738	37.170	7.901	38
39	38.251	7.609	38.217	7.775	38.183	7.942	38.148	8.109	39
40	39.231	7.804	39.197	7.975	39.162	8.146	39.126	8.316	40
41	40,212	7.999	40.177	8.174	40.141	8.349	40.104	8.524	41
42	41.193	8.194	41.157	8.373	41.120	8.553	41.082	8.732	42
43	42.174	8.389	42.137	8.573	42.099	8.757	42.060	8.940	43
44	43.155	8.584	43.117	8.772	43.078	8.960	43.038	9.148	44
45	44.135	8.779	44.097	8.972	44.057	9.164	44.017	9.356	45
46	45.116	8.974	45.077	9.171	45.036	9.368	44.995	9.564	46
47	46.097	9.169	46.056	9.370	46.015	9.571	45.973	9.772	47
48	47.078	9.364	47.036	9.570	47.994	9.778	46.951	9.980	48
49	48.058	9.559	48.016	9.769	48.973	9.975	47.929	10.188	49
50	49.039	9.755	48.996	9.968	49.952	10.182	48.907	10.396	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	78 Degrees.								

Dist.	11 Degrees.						12 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	50.020	9.950	49.976	10.168	49.931	10.386	49.886	10.603	51
52	51.001	10.145	50.956	10.367	50.910	10.589	50.864	10.811	52
53	51.982	10.340	51.936	10.567	51.889	10.793	51.842	11.019	53
54	52.962	10.535	52.916	10.766	52.868	10.997	52.820	11.227	54
55	53.943	10.730	53.896	10.965	53.848	11.200	53.798	11.435	55
56	54.924	10.925	54.876	11.165	54.827	11.404	54.776	11.643	56
57	55.905	11.120	55.856	11.364	55.806	11.608	55.754	11.851	57
58	56.886	11.315	56.836	11.563	56.785	11.811	56.733	12.059	58
59	57.866	11.510	57.816	11.763	57.764	12.015	57.711	12.267	59
60	58.847	11.705	58.795	11.962	58.743	12.219	58.689	12.475	60
61	59.828	11.901	59.775	12.161	59.722	12.422	59.667	12.683	61
62	60.809	12.096	60.755	12.361	60.701	12.626	60.645	12.891	62
63	61.789	12.291	61.735	12.560	61.680	12.829	61.623	13.098	63
64	62.770	12.486	62.715	12.760	62.659	13.033	62.601	13.306	64
65	63.751	12.681	63.695	12.959	63.638	13.237	63.580	13.514	65
66	64.732	12.876	64.675	13.158	64.617	13.440	64.558	13.722	66
67	65.713	13.071	65.655	13.358	65.596	13.644	65.536	13.930	67
68	66.693	13.266	66.635	13.557	66.575	13.848	66.514	14.138	68
69	67.674	13.461	67.615	13.756	67.554	14.051	67.492	14.346	69
70	68.655	13.656	68.595	13.956	68.533	14.255	68.470	14.554	70
71	69.636	13.851	69.575	14.155	69.512	14.459	69.448	14.762	71
72	70.617	14.047	70.555	14.354	70.491	14.662	70.427	14.970	72
73	71.597	14.242	71.535	14.554	71.470	14.866	71.405	15.178	73
74	72.578	14.437	72.514	14.753	72.449	15.069	72.383	15.385	74
75	73.559	14.632	73.494	14.953	73.428	15.273	73.361	15.593	75
76	74.540	14.827	74.474	15.152	74.407	15.477	74.339	15.801	76
77	75.520	15.022	75.454	15.351	75.387	15.680	75.317	16.009	77
78	76.501	15.217	76.434	15.551	76.366	15.884	76.296	16.217	78
79	77.482	15.412	77.414	15.750	77.345	16.088	77.274	16.425	79
80	78.463	15.607	78.394	15.949	78.324	16.291	78.252	16.633	80
81	79.444	15.802	79.374	16.149	79.303	16.495	79.230	16.841	81
82	80.424	15.997	80.354	16.348	80.282	16.699	80.208	17.049	82
83	81.405	16.192	81.334	16.548	81.261	16.902	81.186	17.257	83
84	82.386	16.388	82.314	16.747	82.240	17.106	82.164	17.465	84
85	83.367	16.583	83.294	16.946	83.219	17.310	83.142	17.672	85
86	84.348	16.778	84.274	17.146	84.198	17.513	84.121	17.880	86
87	85.328	16.973	85.253	17.345	85.177	17.717	85.099	18.088	87
88	86.309	17.168	86.233	17.544	86.156	17.920	86.077	18.296	88
89	87.290	17.363	87.213	17.744	87.135	18.124	87.055	18.504	89
90	88.271	17.558	88.193	17.943	88.114	18.328	88.033	18.712	90
91	89.251	17.753	89.173	18.142	89.093	18.531	89.011	18.920	91
92	90.232	17.948	90.153	18.342	90.072	18.735	89.990	19.128	92
93	91.213	18.143	91.133	18.541	91.051	18.939	90.968	19.336	93
94	92.194	18.338	92.113	18.741	92.030	19.142	91.946	19.544	94
95	93.175	18.534	93.093	18.940	93.009	19.346	92.924	19.752	95
96	94.155	18.729	94.073	19.139	93.988	19.550	93.902	19.960	96
97	95.136	18.924	95.053	19.339	94.967	19.753	94.880	20.167	97
98	96.117	19.119	96.033	19.538	95.946	19.957	95.858	20.375	98
99	97.098	19.314	97.013	19.737	96.926	20.161	96.837	20.583	99
100	98.079	19.509	97.992	19.937	97.905	20.364	97.815	20.791	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	78 Degrees.								

Dist.	12 Degrees.						13 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.977	0.212	0.976	0.216	0.975	0.221	0.974	0.225	1
2	1.954	0.424	1.953	0.433	1.951	0.441	1.949	0.450	2
3	2.932	0.637	2.929	0.649	2.926	0.662	2.923	0.675	3
4	3.909	0.849	3.905	0.866	3.901	0.883	3.897	0.900	4
5	4.886	1.061	4.881	1.082	4.877	1.103	4.872	1.125	5
6	5.863	1.273	5.858	1.299	5.852	1.324	5.846	1.350	6
7	6.841	1.485	6.834	1.515	6.827	1.545	6.821	1.575	7
8	7.818	1.697	7.810	1.732	7.803	1.766	7.795	1.800	8
9	8.795	1.910	8,787	1.948	8.778	1.986	8.769	2.025	9
10	9.772	2.122	9.763	2.164	9.753	2.207	9.744	2.249	10
11	10.750	2.334	10.739	2.381	10.729	2.428	10.718	2.474	11
12	11.727	2.546	11.716	2.597	11.704	2.648	11.692	2.699	12
13	12.704	2.758	12.692	2.814	12.679	2.869	12.667	2.924	13
14	13.681	2.971	13.668	3.030	13.655	3.090	13.641	3.149	14
15	14.658	3.183	14.644	3.247	14.630	3.310	14.616	3.374	15
16	15.636	3.395	15.621	3.463	15.605	3.531	15.590	3.599	16
17	16.613	3.607	16.597	3.679	16.581	3.752	16.564	3.824	17
18	17.590	3.819	17.573	3.896	17.556	3.973	17.539	4.049	18
19	18.567	4.031	18.550	4.112	18.531	4.193	18.513	4.274	19
20	19.545	4.244	19.526	4.329	19.507	4.414	19.487	4.499	20
21	20.522	4.456	20.502	4.545	20.482	4.635	20.462	4.724	21
22	21.499	4.668	21.479	4.762	21.457	4.855	21.436	4.949	22
23	22.476	4.880	22.455	4.978	22.433	5.079	22.411	5.174	23
24	23.454	5.092	23.431	5.195	23.408	5.297	23.385	5.399	24
25	24.431	5.304	24.408	5.411	24.384	5.517	24.359	5.624	25
26	25.408	5.517	25.384	5.627	25.359	5.738	25.334	5.849	26
27	26.385	5.729	26.360	5.844	26.334	5.959	26.308	6.074	27
28	27.362	5.941	27.336	6.060	27.310	6.180	27.282	6.299	28
29	28.340	6.153	28.313	6.277	28.285	6.400	28.257	6.524	29
30	29.317	6.365	29.289	6.493	29.260	6.621	29.231	6.748	30
31	30.294	6.578	30.265	6.710	30.236	6.842	30.205	6.973	31
32	31.271	6.790	31.242	6.926	31.211	7.062	31.180	7.198	32
33	32.249	7.002	32.218	7.143	32.186	7.283	32.154	7.423	33
34	33.226	7.214	33.194	7.359	33.162	7.504	33.129	7.648	34
35	34.203	7.426	34.170	7.575	34.137	7.724	34.103	7.873	35
36	35.180	7.638	35.147	7.792	35.112	7.945	35.077	8.098	36
37	36.158	7,851	36.123	8.008	36.088	8.166	36.052	8.323	37
38	37.135	8.063	37.099	8.225	37.063	8.387	37.026	8.548	38
39	38.112	8.275	38.076	8.441	38.038	8.607	38.000	8.773	39
40	39.089	8.487	39.052	8.658	39.014	8.828	38.975	8.998	40
41	40.066	8.699	40.028	8.874	39.989	9.049	39.949	9.223	41
42	41.044	8.912	41.005	9.090	40.964	9.269	40.924	9.448	42
43	42.021	9.124	41.981	9.307	41.940	9.490	41.898	9.673	43
44	42.998	9.336	42.957	9.523	42.915	9.711	42.872	9.898	44
45	43.975	9.548	43.933	9.740	43.890	9.931	43.847	10.123	45
46	44.953	9.760	44.910	9.956	44.860	10.152	44.821	10.348	46
47	45.930	9.972	45.886	10.173	45.841	10.373	45.795	10.573	47
48	46.907	10.185	46.862	10.389	46.816	10.594	46.770	10.798	48
49	47.884	10.397	47.839	10.606	47.792	10.814	47.744	11.023	49
50	48.861	10.609	48.815	10.822	48.767	11.035	48.718	11.247	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	77 Degrees.								

Dist.	12 Degrees.						13 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	49.839	10.821	49.791	11.038	49.742	11.256	49.693	11.472	51
52	50.816	11.033	50.768	11.255	50.718	11.476	50.667	11.697	52
53	51.793	11.246	51.744	11.471	51.693	11.697	51.642	11.922	53
54	52.770	11.458	52.720	11.688	52.668	11.918	52.616	12.147	54
55	53.748	11.670	53.696	11.904	53.644	12.138	53.590	12.372	55
56	54.725	11.882	54.673	12.121	54.619	12.359	54.565	12.597	56
57	55.702	12.094	55.649	12.337	55.594	12.580	55.539	12.822	57
58	56.679	12.306	56.625	12.554	56.570	12.801	56.513	13.047	58
59	57.657	12.519	57.602	12.770	57.545	13.021	57.488	13.272	59
60	58.634	12.731	58.578	12.986	58.520	13.242	58.462	13.497	60
61	59.611	12.943	59.554	13.203	59.496	13.463	59.437	13.722	61
62	60.588	13.155	60.531	13.419	60.471	13.683	60.411	13.947	62
63	61.565	13.367	61.507	13.636	61.446	13.904	61.385	14.172	63
64	62.543	13.580	62.483	13.852	62.422	14.125	62.360	14.397	64
65	63.520	13.792	63.459	14.069	63.397	14.345	63.334	14.622	65
66	64.497	14.004	64.436	14.285	64.372	14.566	64.308	14.847	66
67	65.474	14.216	65.412	14.501	65.348	14.787	65.283	15.072	67
68	66.452	14.428	66.388	14.718	66.323	15.008	66.257	15.297	68
69	67.429	14.640	67.365	14.934	67.298	15.228	67.232	15.522	69
70	68.406	14.853	68.341	15.151	68.274	15.449	68.206	15.746	70
71	69.383	15.065	69.317	15.367	69.249	15.670	69.180	15.971	71
72	70.361	15.277	70.294	15.584	70.224	15.890	70.155	16.196	72
73	71.338	15.489	71.270	15.800	71.200	16.111	71.129	16.421	73
74	72.315	15.701	72.246	16.017	72.175	16.332	72.103	16.646	74
75	73.292	15.914	73.222	16.233	73.150	16.552	73.078	16.871	75
76	74.269	16.120	74.199	16.449	74.126	16.773	74.052	17.096	76
77	75.248	16.338	75.175	16.666	75.101	16.994	75.026	17.321	77
78	76.224	16.550	76.151	16.882	76.077	17.215	76.001	17.546	78
79	77.201	16.762	77.128	17.099	77.052	17.435	76.975	17.771	79
80	78.178	16.974	78.104	17.315	78.027	17.656	77.950	17.996	80
81	79.156	17.187	79.080	17.532	79.003	17.877	78.924	18.221	81
82	80.132	17.399	80.057	17.748	79.978	18.097	79.898	18.446	82
83	81.110	17.611	81.033	17.965	80.953	18.318	80.873	18.671	83
84	82.087	17.823	82.009	18.181	81.929	18.539	81.847	18.896	84
85	83.065	18.035	82.985	18.397	82.904	18.759	82.821	19.121	85
86	84.042	18.247	83.962	18.614	83.879	18.980	83.796	19.346	86
87	85.019	18.460	84.938	18.830	84.855	19.201	84.770	19.571	87
88	85.996	18.672	85.914	19.047	85.830	19.422	85.745	19.796	88
89	86.973	18.884	86.891	19.263	86.805	19.642	86.719	20.021	89
90	87.951	19.096	87.867	19.480	87.781	19.863	87.693	20.245	90
91	88.928	19.308	88.843	19.696	88.776	20.084	88.668	20.470	91
92	89.905	19.521	89.820	19.912	89.731	20.304	89.642	20.695	92
93	90.882	19.733	90.796	20.129	90.707	20.525	90.616	20.920	93
94	91.860	19.945	91.772	20.345	91.682	20.746	91.591	21.145	94
95	92.837	20.157	92.748	20.562	92.657	20.966	92.565	21.370	95
96	93.814	20.369	93.725	20.778	93.632	21.187	93.540	21.595	96
97	94.791	20.581	94.701	20.995	94.608	21.408	94.514	21.820	97
98	95.769	20.794	95.677	21.211	95.583	21.629	95.488	22.045	98
99	96.746	21.006	96.654	21.428	96.559	21.849	96.463	22.270	99
100	97.723	21.218	97.630	21.644	97.534	22.070	97.437	22.495	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	77 Degrees.								

D 2

Dist.	13 Degrees.						14 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.973	0.229	0.972	0.233	0.971	0.238	0.970	0.242	1
2	1.947	0.458	1.945	0.467	1.943	0.475	1.941	0.484	2
3	2,920	0.688	2.917	0.700	2.914	0.713	2.911	0.726	3
4	3.894	0.917	3.889	0.934	3.885	0.951	3.881	0.968	4
5	4.867	1.146	4.862	1.167	4.857	1.188	4.851	1.210	5
6	5.840	1.375	5.834	1.401	5.828	1.426	5.822	1.452	6
7	6.814	1.604	6.807	1.634	6.799	1.664	6,792	1.693	7
8	7.787	1.834	7.779	1.868	7.771	1.902	7.762	1.935	8
9	8.760	2.063	8.751	2.101	8.742	2.139	8.733	2.177	9
10	9.734	2.292	9.724	2.334	9.713	2.377	9.703	2.419	10
11	10.707	2.521	10.696	2.568	10.685	2.615	10.673	2.661	11
12	11.681	2.750	11.668	2.801	11.656	2.852	11.644	2.903	12
13	12.654	2.980	12.641	3.035	12.627	3.090	12.614	3.145	13
14	13.627	3.209	13.613	3.268	13.599	3.328	13.584	3.387	14
15	14.601	3.438	14.586	3.502	14.570	3.565	14.554	3.629	15
16	15.574	3.667	15.558	3.735	15.541	3.803	15.525	3.871	16
17	16.547	3.896	16.530	3.969	16.513	4.041	16.495	4.113	17
18	17.521	4.126	17.503	4.202	17.484	4.278	17.465	4.355	18
19	18.494	4.355	18.475	4.436	18.455	4.516	18.436	4.596	19
20	19.468	4.584	19.447	4.669	19.427	4.754	19.406	4.838	20
21	20.441	4.813	20.420	4.902	20.398	4.991	20.376	5.080	21
22	21.414	5.042	21.392	5.136	21.369	5.229	21.347	5.322	22
23	22.388	5.272	22.365	5.369	22.341	5.467	22.317	5.564	23
24	23.361	5.501	23.337	5.603	23.312	5.705	23.287	5.806	24
25	24.335	5.730	24.309	5.836	24.283	5.942	24.257	6.048	25
26	25.308	5.959	25.282	6.070	25.255	6.180	25.228	6.290	26
27	26.281	6.188	26.254	6.303	26.226	6.418	26.198	6.532	27
28	27.255	6.418	27.226	6.537	27.198	6.655	27.168	6.774	28
29	28.228	6.647	28.199	6.770	28.169	6.893	28.139	7.016	29
30	29.201	6.876	29.171	7.003	29.140	7.131	29.109	7.258	30
31	30.175	7.105	30.143	7.237	30.112	7.368	30.079	7.500	31
32	31.148	7.334	31.116	7.470	31.083	7.606	31.050	7.741	32
33	32.122	7.564	32.088	7.704	32.054	7.844	32.020	7.983	33
34	33.095	7.793	33.061	7.937	33.026	8.081	32.990	8.225	34
35	34.068	8.022	34.033	8.171	33.997	8.319	33.960	8.467	35
36	35.042	8.251	35.005	8.404	34.968	8.557	34.931	8.709	36
37	36.015	8.480	35.978	8.638	35.940	8.795	35.901	8.951	37
38	36.988	8.710	36.950	8.871	36.911	9.032	36,871	9.193	38
39	37.962	8.939	37.922	9.105	37.882	9.270	37.842	9.435	39
40	38.935	9.168	38.895	9.338	38.854	9.508	38.812	9.677	40
41	39.909	9.397	39.867	9.571	39.825	9.745	39.782	9.919	41
42	40.882	9.626	40.840	9.805	40.796	9.983	40.753	10.161	42
43	41.855	9.856	41.812	10.038	41.768	10.221	41.723	10.403	43
44	42.829	10.085	42.784	10.272	42.739	10.458	42.693	10.644	44
45	43.802	10.314	43.757	10.505	43.710	10.696	43.663	10.886	45
46	44.775	10.543	44.729	10.739	44.682	10.934	44.634	11.128	46
47	45.749	10.772	45.701	10.972	45.653	11.171	45.604	11.370	47
48	46.722	11.002	46.674	11.206	46.624	11.409	46.574	11.612	48
49	47.696	11.231	47.646	11.439	47.596	11.647	47.545	11.854	49
50	48.669	11.460	48.618	11.672	48.567	11.884	48.515	12.096	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	76 Degrees.								

Dist.	13 Degrees.						14 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S	E. W.	N. S	E. W.	N. S.	E. W.	N. S.	E. W.	
51	49.642	11.689	49.591	11.906	49.538	12.122	49.485	12.338	51
52	50.616	11.918	50.563	12.139	50.510	12.360	50.456	12.580	52
53	51.589	12.148	51.536	12.373	51.481	12.598	51.426	12.822	53
54	52.563	12.377	52.508	12.606	52.452	12.835	52.396	13.064	54
55	53.536	12.606	53.480	12.840	53.424	13.073	53.366	13.306	55
56	54.509	12.835	54.453	13.073	54.395	13.311	54.337	13.548	56
57	55.483	13.004	55.425	13.307	55.366	13.548	55.307	13.789	57
58	56.456	13.294	56.397	13.540	56.338	13.786	56.277	14.031	58
59	57.429	13.523	57.370	13.774	57.309	14.024	57.248	14.273	59
60	58.403	13.752	58.342	14.007	58.280	14.261	58.218	14.515	60
61	59.376	13.981	59.315	14.240	59.252	14.499	59.188	14.757	61
62	60.350	14.210	60.287	14.474	60.223	14.737	60.159	14.999	62
63	61.323	14.440	61.259	14.707	61.194	14.974	61.129	15.241	63
64	62.296	14.669	62.232	14.941	62.166	15.212	62.099	15.483	64
65	63.270	14.898	63.204	15.174	63.137	15.450	63.069	15.725	65
66	64.243	15.127	64.176	15.408	64.108	15.688	64.040	15.967	66
67	65.216	15.356	65.149	15.641	65.080	15.925	65.010	16.209	67
68	66.190	15.586	66.121	15.875	66.051	16.163	65.980	16.451	68
69	67.163	15.815	67.094	16.108	67.022	16.401	66.951	16.692	69
70	68.137	16.044	68.066	16.341	67.994	16.638	67.921	16.934	70
71	69.110	16.273	69.038	16.575	68.965	16.876	68.891	17.176	71
72	70.083	16.502	70.011	16.808	69.936	17.114	69.862	17.418	72
73	71.057	16.732	70.983	17.042	70.908	17.351	70.832	17.660	73
74	72.030	16.961	71.955	17.275	71.879	17.589	71.802	17.902	74
75	73.003	17.190	72.928	17.509	72.850	17.827	72.772	18.144	75
76	73.977	17.419	73.900	17.742	73.822	18.064	73.743	18.386	76
77	74.950	17.648	74.872	17.976	74.793	18.302	74.713	18.628	77
78	75.924	17.878	75.845	18.209	75.765	18.540	75.683	18.870	78
79	76.897	18.107	76.817	18.443	76.736	18.778	76.654	19.112	79
80	77.870	18.336	77.790	18.676	77.707	19.015	77.624	19.354	80
81	78.844	18.565	78.762	18.909	78.679	19.253	78.594	19.596	81
82	79.817	18.794	79.734	19.143	79.650	19.491	79.565	19.837	82
83	80.791	19.024	80.707	19.376	80.621	19.728	80.535	20.079	83
84	81.764	19.253	81.679	19.610	81.593	19.966	81.505	20.321	84
85	82.737	19.482	82.651	19.843	82.564	20.204	82.476	20.563	85
86	83.711	19.711	83.624	20.077	83.535	20.441	83.446	20.805	86
87	84.684	19.940	84.596	20.310	84.507	20.679	84.416	21.047	87
88	85.657	20.170	85.569	20.544	85.478	20.917	85.386	21.289	88
89	86.631	20.399	86.541	20.777	86.449	21.154	86.357	21.531	89
90	87.604	20.628	87.513	21.010	87.421	21.392	87.327	21.773	90
91	88.578	20.857	88.486	21.244	88.392	21.630	88.297	22.015	91
92	89.551	21.086	89.458	21.477	89.363	21.867	89.268	22.257	92
93	90.524	21.316	90.430	21.711	90.335	22.105	90.238	22.499	93
94	91.498	21.545	91.403	21.944	91.306	22.343	91.208	22.740	94
95	92.471	21.774	92.375	22.178	92.277	22.581	92.178	22.982	95
96	93.444	22.003	93.348	22.411	93.249	22.818	93.149	23.224	96
97	94.418	22.232	94.320	22.645	94.220	23.056	94.119	23.466	97
98	95.391	22.462	95.292	22.878	95.191	23.294	95.089	23.708	98
99	96.365	22.691	96.265	23.112	96.163	23.531	96.060	23.950	99
100	97.338	22.920	97.237	23.345	97.134	23.769	97.030	24.192	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	76 Degrees.								

Dist.	14 Degrees.						15 Degrees.		Dist.
	15. Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.969	0.246	0.968	0.250	0.967	0.255	0.966	0.259	1
2	1.938	0.492	1.936	0.501	1.934	0.509	1.932	0.518	2
3	2.908	0.738	2.904	0.751	2.901	0.764	2.898	0.776	3
4	3.877	0.985	3.873	1.002	3.868	1.018	3.864	1.035	4
5	4.846	1.231	4.841	1.252	4.835	1.273	4.830	1.294	5
6	5.815	1.477	5.809	1.502	5.802	1.528	5.796	1.553	6
7	6.785	1.723	6.777	1.753	6.769	1.782	6.762	1.812	7
8	7.754	1.969	7.745	2.003	7.736	2.037	7.727	2.071	8
9	8.723	2.215	8.713	2.253	8.703	2.291	8.693	2.329	9
10	9.692	2.461	9.681	2.504	9.670	2.546	9.659	2.588	10
11	10.662	2.708	10.650	2.754	10.638	2.801	10.625	2.847	11
12	11.631	2.954	11.618	3.005	11.605	3.055	11.591	3.106	12
13	12.600	3.200	12.586	3.255	12.572	3.310	12.557	3.365	13
14	13.569	3.446	13.554	3.505	13.539	3.564	13.523	3.623	14
15	14.538	3.692	14.522	3.756	14.506	3.819	14.489	3.882	15
16	15.508	3.938	15.490	4.006	15.473	4.074	15.455	4.141	16
17	16.477	4.185	16.459	4.256	16.440	4.328	16.421	4.400	17
18	17.446	4.431	17.427	4.507	17.407	4.583	17.387	4.659	18
19	18.415	4.677	18.395	4.757	18.374	4.837	18.353	4.918	19
20	19.385	4.923	19.363	5.008	19.341	5.092	19.319	5.176	20
21	20.354	5.169	20.331	5.258	20.308	5.347	20.285	5.435	21
22	21.323	5.415	21.299	5.508	21.275	5.601	21.250	5.694	22
23	22.292	5.661	22.267	5.759	22.242	5.856	22.216	5.953	23
24	23.262	5.908	23.236	6.009	23.209	6.110	23.182	6.212	24
25	24.231	6.154	24.204	6.259	24.176	6.365	24.148	6.470	25
26	25.200	6.400	25.172	6.510	25.143	6.620	25.114	6.729	26
27	26.169	6.646	26.140	6.760	26.110	6.874	26.080	6.988	27
28	27.138	6.892	27.108	7.011	27.077	7.129	27.046	7.247	28
29	28.108	7.138	28.076	7.261	28.044	7.383	28.012	7.506	29
30	29.077	7.384	29.044	7.511	29.011	7.638	28.978	7.765	30
31	30.046	7.631	30.013	7.762	29.979	7.893	29.944	8.023	31
32	31.015	7.877	30.981	8.012	30.946	8.147	30.910	8.282	32
33	31.985	8.123	31.949	8.263	31.913	8.402	31.876	8.541	33
34	32.954	8.369	32.917	8.513	32.880	8.656	32.842	8.800	34
35	33.923	8.615	33.885	8.763	33.847	8.911	33.808	9.059	35
36	34.892	8.861	34.853	9.014	34.814	9.166	34.773	9.318	36
37	35.862	9.108	35.822	9.264	35.781	9.420	35.739	9.576	37
38	36.831	9.354	36.790	9.514	36.748	9.675	36.705	9.835	38
39	37.800	9.600	37.758	9.765	37.715	9.929	37.671	10.094	39
40	38.769	9.846	38.726	10.015	38.682	10.184	38.637	10.353	40
41	39.738	10.092	39.694	10.266	39.649	10.439	39.603	10.612	41
42	40.708	10.338	40.662	10.516	40.616	10.693	40.569	10.870	42
43	41.677	10.584	41.630	10.766	41.583	10.948	41.535	11.129	43
44	42.646	10.831	42.599	11.017	42.550	11.202	42.501	11.388	44
45	43.615	11.077	43.567	11.267	43.517	11.457	43.467	11.647	45
46	44.585	11.323	44.535	11.517	44.484	11.712	44.433	11.906	46
47	45.554	11.569	45.503	11.768	45.451	11.966	45.399	12.165	47
48	46.523	11.815	46.471	12.018	46.418	12.221	46.365	12.423	48
49	47.492	12.061	47.439	12.269	47.385	12.475	47.331	12.682	49
50	48.461	12.307	48.407	12.519	48.352	12.730	48.296	12.941	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	75 Degrees.								

Dist.	14 Degrees.						15 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	49.431	12.554	49.376	12.769	49.320	12.985	49.262	13.200	51
52	50.400	12.800	50.344	13.020	50.287	13.239	50.228	13.459	52
53	51.369	13.046	51.312	13.270	51.254	13.494	51.194	13.717	53
54	52.338	13.292	52.280	13.521	52.221	13.748	52.160	13.976	54
55	53.308	13.538	53.248	13.771	53.188	14.003	53.126	14.235	55
56	54.277	13.784	54.216	14.021	54.155	14.258	54.092	14.494	56
57	55.246	14.031	55.185	14.272	55.122	14.512	55.058	14.753	57
58	56.215	14.277	56.153	14.522	56.089	14.767	50.024	15.012	58
59	57.185	14.523	57.121	14.772	57.056	15.021	56.990	15.270	59
60	58.154	14.769	58.089	15.023	58.023	15.276	57.956	15.529	60
61	59.123	15.015	59.057	15.273	58.990	15.531	58.922	15.788	61
62	60.092	15.261	60.025	15.524	59.957	15.785	59.888	16.047	62
63	61.061	15.507	60.993	15.774	60.924	16.040	60.854	16.306	63
64	62.031	15.754	61.962	16.024	61.891	16.294	61.820	16.564	64
65	63.000	16.000	62.930	16.275	62.858	16.549	62.785	16.823	65
66	63.969	16.246	63.898	16.525	63.825	16.804	63.751	17.082	66
67	64.938	16.492	64.866	16.775	64.792	17.058	64.717	17.341	67
68	65.908	16.738	65.834	17.026	65.759	17.313	65.683	17.600	68
69	66.877	16.984	66.802	17.276	66.726	17.567	66.649	17.859	69
70	67.846	17.230	67.770	17.527	67.693	17.822	67.615	18.117	70
71	68.815	17.477	68.739	17.777	68.661	18.077	68.581	18.376	71
72	69.785	17.723	69.707	18.027	69.628	18.331	69.547	18.635	72
73	70.754	17.969	70.675	18.278	70.595	18.586	70.513	18.894	73
74	71.723	18.215	71.643	18.528	71.562	18.840	71.479	19.153	74
75	72.692	18.461	72.611	18.778	72.529	19.095	72.445	19.411	75
76	73.661	18.707	73.579	19.029	73.496	19.350	73.411	19.670	76
77	74.631	18.954	74.548	19.279	74.463	19.604	74.377	19.929	77
78	75.600	19.200	75.516	19.530	75.430	19.859	75.343	20.188	78
79	76.569	19.446	76.482	19.780	76.397	20.113	76.308	20.447	79
80	77.538	19.692	77.452	20.030	77.364	20.368	77.274	20.706	80
81	78.508	19.938	78.420	20.281	78.331	20.623	78.240	20.964	81
82	79.477	20.184	79.388	20.531	79.298	20.877	79.206	21.223	82
83	80.446	20.430	80.356	20.782	80.265	21.132	80.172	21.482	83
84	81.415	20.677	81.325	21.032	81.232	21.386	81.138	21.741	84
85	82.385	20.923	82.293	21.282	82.199	21.641	82.104	22.000	85
86	83.354	21.169	83.261	21.533	83.166	21.896	83.070	22.259	86
87	84.323	21.415	84.229	21.783	84.133	22.150	84.036	22.517	87
88	85.292	21.661	85.197	22.033	85.100	22.405	85.002	22.776	88
89	86.261	21.907	86.165	22.284	86.067	22.659	85.968	23.035	89
90	87.231	22.153	87.133	22.534	87.034	22.914	86.934	23.294	90
91	88.200	22.400	88.102	22.785	88.002	23.169	87.900	23.553	91
92	89.169	22.646	89.070	23.035	88.969	23.423	88.866	23.811	92
93	90.138	22.892	90.038	23.285	89.936	23.678	89.831	24.070	93
94	91.108	23.138	91.006	23.536	90.903	23.932	90.797	24.329	94
95	92.077	23.384	91.974	23.786	91.870	24.187	91.763	24.588	95
96	93.046	23.630	92.942	24.036	92.837	24.442	92.729	24.847	96
97	94.015	23.877	93.911	24.287	93.804	24.696	93.695	25.106	97
98	94.985	24.123	94.879	24.537	94.771	24.951	94.661	25.364	98
99	95.954	24.369	95.847	24.788	95.738	25.205	95.627	25.623	99
100	96.923	24.615	96.815	25.038	96.705	25.460	96.593	25.882	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	75 Degrees.								

Dist.	15 Degrees.						16 Degrees.		Dist.
	15 Min		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.965	0.263	0.964	0.267	0.962	0.271	0.961	0.276	1
2	1.930	0.526	1.927	0.534	1.925	0.543	1.923	0.551	2
3	2.894	0.789	2.891	0.802	2.887	0.814	2.884	0.827	3
4	3.859	1.052	3.855	1.069	3.850	1.086	3.845	1.103	4
5	4.824	1.315	4.818	1.336	4.812	1.357	4.806	1.378	5
6	5.789	1.578	5.782	1.603	5.775	1.629	5.768	1.654	6
7	6.754	1.841	6.745	1.871	6.737	1.900	6.729	1.929	7
8	7.718	2.104	7.709	2.138	7.700	2.172	7.690	2.205	8
9	8.683	2.367	8.673	2.405	8.662	2.443	8.651	2.481	9
10	9.648	2.630	9.636	2.672	9.625	2.714	9.613	2.756	10
11	10.613	2.893	10.600	2.940	10.587	2.986	10.574	3.032	11
12	11.577	3.156	11.564	3.207	11.550	3.257	11.535	3.308	12
13	12.542	3.419	12.527	3.474	12.512	3.529	12.496	3.583	13
14	13.507	3.682	13.491	3.741	13.474	3.800	13.458	3.859	14
15	14.472	3.945	14.454	4.009	14.437	4.072	14.419	4.135	15
16	15.437	4.208	15.418	4.276	15.399	4.343	15.380	4.410	16
17	16.401	4.472	16.382	4.543	16.362	4.614	16.341	4.686	17
18	17.366	4.735	17.345	4.810	17.324	4.886	17.303	4.962	18
19	18.331	4.998	18.309	5.078	18.287	5.157	18.264	5.237	19
20	19.296	5.261	19.273	5.345	19.249	5.429	19.225	5.513	20
21	20.261	5.524	20.236	5.612	20.212	5.700	20.186	5.788	21
22	21.225	5.787	21.200	5.879	21.174	5.972	21.148	6.064	22
23	22.190	6.050	22.163	6.147	22.137	6.243	22.109	6.340	23
24	23.155	6.313	23.127	6.414	23.099	6.515	23.070	6.615	24
25	24.120	6.576	24.091	6.681	24.061	6.780	24.031	6.891	25
26	25.085	6.839	25.054	6.948	25.024	7.057	24.993	7.167	26
27	26.049	7.102	26.018	7.215	25.986	7.329	25.954	7.442	27
28	27.014	7.365	26.982	7.483	26.949	7.600	26.915	7.718	28
29	27.979	7.628	27.945	7.750	27.911	7.872	27.877	7.994	29
30	28.944	7.891	28.909	8.017	28.874	8.143	28.838	8.269	30
31	29.908	8.154	29.873	8.284	29.836	8.414	29.799	8.545	31
32	30.873	8.417	30.836	8.552	30.799	8.686	30.760	8.820	32
33	31.838	8.680	31.800	8.819	31.761	8.958	31.722	9.096	33
34	32.803	8.943	32.763	9.086	32.724	9.229	32.683	9.372	34
35	33.768	9.206	33.727	9.353	33.686	9.500	33.644	9.647	35
36	34.732	9.469	34.691	9.621	34.649	9.772	34.605	9.923	36
37	35.697	9.732	35.654	9.888	35.611	10.043	35.567	10.199	37
38	36.662	9.995	36.618	10.155	36.573	10.315	36.528	10.474	38
39	37.627	10.258	37.582	10.422	37.536	10.586	37.489	10.750	39
40	38.592	10.521	38.545	10.690	38.498	10.858	38.450	11.026	40
41	39.556	10.784	39.509	10.957	39.461	11.129	39.412	11.301	41
42	40.521	11.047	40.472	11.224	40.423	11.400	40.373	11.577	42
43	41.486	11.310	41.436	11.491	41.386	11.672	41.334	11.853	43
44	42.451	11.573	42.400	11.759	42.348	11.943	42.295	12.128	44
45	43.416	11.836	43.363	12.026	43.311	12.215	43.257	12.404	45
46	44.380	11.099	44.327	12.293	44.273	12.486	44.218	12.679	46
47	45.345	12.362	45.291	12.560	45.236	12.758	45.179	12.955	47
48	46.310	12.625	46.254	12.828	46.198	13.029	46.140	13.231	48
49	47.275	12.888	47.218	13.095	47.161	13.301	47.102	13.506	49
50	48.239	13.151	48.181	13.362	48.123	13.572	48.063	13.782	50
Dist.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	E. W	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	74 Degrees.								

Dist.	15 Degrees						16 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	49.204	13.415	49.145	13.629	49.085	13.843	49.024	14.058	51
52	50.169	13.678	50.109	13.896	50.048	14.115	49.986	14.333	52
53	51.134	13.941	51.072	14.163	51.010	14.386	50.947	14.609	53
54	52.099	14.204	52.036	14.431	51.973	14.658	51.908	14.885	54
55	53.063	14.467	53.000	14.698	52.935	14.929	52.869	15.160	55
56	54.028	14.730	53.963	14.965	53.898	15.201	53.831	15.436	56
57	54.993	14.993	54.927	15.233	54.860	15.472	54.792	15.711	57
58	55.958	15.256	55.891	15.500	55.823	15.744	55.753	15.987	58
59	56.923	15.519	56.854	15.767	56.785	16.015	56.714	16.263	59
60	57.887	15.782	57.818	16.03	57.748	16.286	57.676	16.538	60
61	58.852	16.045	58.781	16.302	58.710	16.558	58.637	16.814	61
62	59.817	16.308	59.745	16.569	59.673	16.829	59.598	17.090	62
63	60.782	16.571	60.709	16.836	60.635	17.101	60.559	17.365	63
64	61.747	16.834	61.672	17.103	61.597	17.372	61.521	17.641	64
65	62.711	17.097	62.636	17.371	62.560	17.644	62.482	17.917	65
66	63.676	17.360	63.600	17.638	63.522	17.915	63.443	18.192	66
67	64.641	17.623	64.563	17.905	64.485	18.186	64.404	18.468	67
68	65.606	17.886	65.527	18.172	65.447	18.458	65.366	18.744	68
69	66.571	18.149	66.490	18.440	66.410	18.729	66.327	19.019	69
70	67.535	18.412	67.454	18.707	67.372	19.001	67.288	19.295	70
71	68.500	18.675	68.418	18.974	68.335	19.272	68.249	19.570	71
72	69.465	18.938	69.381	19.241	69.297	19.544	69.211	19.846	72
73	70.430	19.201	70.345	19.509	70.260	19.815	70.172	20.122	73
74	71.394	19.464	71.309	19.776	71.222	20.087	71.133	20.397	74
75	72.359	19.727	72.272	20.043	72.184	20.358	72.094	20.673	75
76	73.324	19.990	73.236	20.310	73.147	20.629	73.056	20.949	76
77	74.289	20.253	74.200	20.577	74.109	20.901	74.017	21.224	77
78	75.254	20.516	75.163	20.845	75.072	21.172	74.978	21.500	78
79	76.218	20.779	76.127	21.112	76.034	21.444	75.940	21.776	79
80	77.183	21.042	77.090	21.379	76.997	21.715	76.901	22.051	80
81	78.148	21.305	78.054	21.646	77.959	21.987	77.862	22.327	81
82	79.113	21.568	79.018	21.914	78.922	22.258	78.823	22.602	82
83	80.078	21.831	79.981	22.181	79.884	22.530	79.785	22.878	83
84	81.042	22.095	80.945	22.448	80.847	22.801	80.746	23.154	84
85	82.007	22.358	81.909	22.715	81.809	23.072	81.707	23.429	85
86	82.972	22.621	82.872	22.983	82.772	23.344	82.668	23.705	86
87	83.937	22.884	83.836	23.250	83.734	23.615	83.630	23.981	87
88	84.912	23.147	84.799	23.517	84.696	23.887	84.591	24.256	88
89	85.866	23.410	85.763	23.784	85.659	24.158	85.552	24.532	89
90	86.831	23.673	86.727	24.052	86.621	24.430	86.513	24.808	90
91	87.796	23.936	87.690	24.319	87.584	24.701	87.475	25.083	91
92	88.761	24.199	88.654	24.586	88.546	24.972	88.436	25.359	92
93	89.725	24.462	89.618	24.853	89.509	25.244	89.397	25.635	93
94	90.690	24.725	90.581	25.121	90.471	25.515	90.358	25.910	94
95	91.655	24.988	91.545	25.388	91.434	25.787	91.320	26.186	95
96	92.620	25.251	92.508	25.655	92.396	26.058	92.281	26.461	96
97	93.585	25.514	93.472	25.922	93.359	26.339	93.242	26.737	97
98	94.545	25.777	94.436	26.190	94.321	26.601	94.203	27.013	98
99	95.514	26.040	95.399	26.457	95.284	26.873	95.165	27.288	99
100	96.479	26.303	96.363	26.724	96.246	27.144	96.126	27.564	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	74 Degrees.								

Dist.	16 Degrees.						17 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.960	0.280	0.959	0.284	0.958	0.288	0.956	0.292	1
2	1.920	0.560	1.918	0.568	1.915	0.576	1.913	0.585	2
3	2.880	0.839	2.876	0.852	2.873	0.865	2.869	0.877	3
4	3.840	1.119	3.835	1.136	3.830	1.153	3.825	1.169	4
5	4.800	1.399	4.794	1.420	4.788	1.441	4.781	1.462	5
6	5.760	1.679	5.753	1.704	5.745	1.729	5.738	1.754	6
7	6.720	1.959	6.712	1.988	6.703	2.017	6.694	2.047	7
8	7.680	2.239	7.671	2.272	7.661	2.306	7.650	2.339	8
9	8.640	2.518	8.629	2.556	8.618	2.594	8.607	2.631	9
10	9.600	2.798	9.588	2.840	9.576	2.882	9.563	2.924	10
11	10.561	3.078	10.547	3.124	10.533	3.170	10.519	3.216	11
12	11.521	3.358	11.506	3.408	11.491	3.458	11.476	3.508	12
13	12.481	3.638	12.465	3.692	12.448	3.747	12.432	3.801	13
14	13.441	3.918	13.423	3.970	13.406	4.035	13.388	4.093	14
15	14.401	4.197	14.382	4.260	14.364	4.323	14.344	4.386	15
16	15.361	4.477	15.341	4.544	15.321	4.611	15.301	4.678	16
17	16.321	4.757	16.300	4.828	16.279	4.899	16.257	4.970	17
18	17.281	5.037	17.259	5.112	17.236	5.188	17.213	5.263	18
19	18.241	5.317	18.218	5.396	18.194	5.476	18.170	5.555	19
20	19.201	5.597	19.176	5.680	19.151	5.764	19.126	5.847	20
21	20.161	5.876	20.135	5.964	20.109	6.052	20.082	6.140	21
22	21.121	6.156	21.094	6.248	21.067	6.340	21.039	6.432	22
23	22.081	6.436	22.053	6.532	22.024	6.629	21.995	6.724	23
24	23.041	6.716	23.012	6.816	22.982	6.917	22.951	7.017	24
25	24.001	6.996	23.970	7.100	23.989	7.205	23.907	7.309	25
26	24.961	7.276	24.929	7.385	24.897	7.493	24.864	7.602	26
27	25.921	7.555	25.888	7.669	25.854	7.781	25.820	7.894	27
28	26.881	7.835	26.847	7.953	26.812	8.070	26.776	8.186	28
29	27.841	8.115	27.806	8.237	27.770	8.358	27.733	8.479	29
30	28.801	8.395	28.765	8.521	28.727	8.646	28.689	8.771	30
31	29.762	8.675	29.723	8.805	29.685	8.934	29.645	9.063	31
32	30.722	8.955	30.682	9.089	30.642	9.222	30.602	9.356	32
33	31.682	9.234	31.641	9.373	31.600	9.511	31.558	9.648	33
34	32.642	9.514	32.600	9.657	32.557	9.799	32.514	9.94	34
35	33.602	9.794	33.559	9.941	33.515	10.087	33.470	10.283	35
36	34.562	10.074	34.518	10.225	34.473	10.375	34.427	10.525	36
37	35.522	10.354	35.476	10.509	35.430	10.663	35.383	10.818	37
38	36.482	10.634	36.435	10.793	36.388	10.952	36.339	11.110	38
39	37.442	10.913	37.394	11.077	37.345	11.240	37.296	11.402	39
40	38.402	11.193	38.353	11.361	38.303	11.528	38.252	11.695	40
41	39.362	11.473	39.312	11.645	39.260	11.816	39.208	11.987	41
42	40.322	11.753	40.270	11.929	40.218	12.104	40.165	12.280	42
43	41.282	12.033	41.229	12.213	41.176	12.393	41.121	12.572	43
44	42.242	12.313	42.188	12.497	42.133	12.681	42.077	12.864	44
45	43.202	12.592	43.147	12.781	43.091	12.969	43.033	13.157	45
46	44.162	12.872	44.106	13.065	44.048	13.257	43.990	13.449	46
47	45.122	13.152	45.065	13.349	45.006	13.545	44.946	13.741	47
48	46.082	13.432	46.023	13.633	45.963	13.834	45.902	14.034	48
49	47.042	13.712	46.982	13.917	46.921	14.122	46.859	14.326	49
50	48.002	13.992	47.941	14.201	47.878	14.410	47.815	14.618	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	73 Degrees.								

Diſt.	16 Degrees.						17 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	48.963	14.271	48.900	14.485	48.836	14.698	48.771	14.911	51
52	49.923	14.551	49.859	14.769	49.794	14.986	49.728	15.203	52
53	50.883	14.831	50.817	14.053	50.751	15.275	50.684	15.496	53
54	51.843	15.111	51.776	15.337	51.709	15.563	51.640	15.788	54
55	52.803	15.391	52.735	15.621	52.666	15.851	52.596	16.080	55
56	53.763	15.670	53.694	15.905	53.624	16.139	53.553	16.373	56
57	54.723	15.950	54.653	16.189	54.581	16.427	54.509	16.665	57
58	55.683	16.230	55.612	16.473	55.539	16.716	55.465	16.957	58
59	56.643	16.510	56.570	16.757	56.497	17.004	56.422	17.250	59
60	57.603	16.790	57.529	17.041	57.454	17.292	57.378	17.542	60
61	58.563	17.070	58.488	17.325	58.[illegible]12	17.580	58.334	17.835	61
62	59.523	17.349	59.447	17.609	59.369	17.868	59.291	18.127	62
63	60.483	17.629	60.406	17.893	60.327	18.157	60.247	18.419	63
64	61.443	17.909	61.364	18.177	61.284	18.445	61.203	18.712	64
65	62.403	18.189	62.323	18.461	62.242	18.733	62.159	19.004	65
66	63.363	18.469	63.282	18.745	63.200	19.021	63.116	19.296	66
67	64.323	18.749	64.241	19.029	64.157	19.309	64.072	19.589	67
68	65.283	19.028	65.200	19.313	65.115	19.598	65.028	19.881	68
69	66.243	19.308	66.159	19.597	66.072	19.886	65.985	20.174	69
70	67.203	19.588	67.117	19.881	67.030	20.174	66.941	20.466	70
71	68.164	19.868	68.076	20.165	67.987	20.462	67.897	20.758	71
72	69.124	20.148	69.035	20.449	68.945	20.750	68.854	21.051	72
73	70.084	20.428	69.994	20.733	69.903	21.039	69.810	21.343	73
74	71.044	20.707	70.953	21.017	70.860	21.327	70.766	21.635	74
75	72.004	20.987	71.911	21.301	71.818	21.615	71.722	21.928	75
76	72.964	21.267	72.870	21.586	72.775	21.903	72.679	22.220	76
77	73.924	21.547	73.829	21.870	73.733	22.191	73.635	22.512	77
78	74.884	21.827	74.788	22.154	74.690	22.480	74.591	22.805	78
79	75.844	22.107	75.747	22.438	75.648	22.768	75.548	23.097	79
80	76.804	22.386	76.706	22.722	76.606	23.056	76.504	23.390	80
81	77.764	22.666	77.664	23.006	77.563	23.344	77.460	23.682	81
82	78.724	22.946	78.623	23.290	78.521	23.632	78.417	23.974	82
83	79.684	23.226	79.582	23.574	79.478	23.921	79.373	24.267	83
84	80.644	23.506	80.541	23.858	80.436	24.209	80.329	24.559	84
85	81.604	23.786	81.500	24.142	81.393	24.497	81.285	24.851	85
86	82.564	24.065	82.459	24.427	82.351	24.785	82.242	25.144	86
87	83.524	24.345	83.417	24.710	83.309	25.073	83.198	25.436	87
88	84.484	24.625	84.376	24.994	84.266	25.362	84.154	25.729	88
89	85.444	24.905	85.335	25.278	85.224	25.650	85.111	26.021	89
90	86.404	25.185	86.294	25.562	86.181	25.938	86.067	26.313	90
91	87.365	25.465	87.253	25.846	87.139	26.226	87.023	26.606	91
92	88.325	25.744	88.211	26.130	88.096	26.514	87.980	26.898	92
93	89.285	26.024	89.170	26.414	89.054	26.803	88.936	27.190	93
94	90.245	26.304	90.129	26.698	90.012	27.091	89.892	27.483	94
95	91.205	26.584	91.088	26.982	90.969	27.379	90.848	27.775	95
96	92.165	26.864	92.047	27.266	91.927	27.667	91.805	28.068	96
97	93.125	27.144	93.006	27.550	92.884	27.955	92.761	28.360	97
98	94.085	27.423	93.964	27.834	93.842	28.244	93.717	28.652	98
99	95.045	27.703	94.923	28.118	94.799	28.532	94.674	28.945	99
100	96.005	27.983	95.882	28.402	95.757	28.820	95.630	29.237	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	73 Degrees.								

Dist.	17 Degrees.						18 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.955	0.297	0.954	0.301	0.952	0.305	0.951	0.309	1
2	1.910	0.593	1.907	0.601	1.905	0.610	1.902	0.618	2
3	2.865	0.890	2.861	0.902	2.857	0.915	2.853	0.927	3
4	3.820	1.186	3.815	1.203	3.810	1.219	3.804	1.236	4
5	4.775	1.483	4.769	1.504	4.762	1.524	4.755	1.545	5
6	5.730	1.779	5.722	1.804	5.714	1.829	5.706	1.854	6
7	6.685	2.076	6.676	2.105	6.667	2.134	6.657	2.163	7
8	7.640	2.372	7.630	2.406	7.619	2.439	7.608	2.472	8
9	8.595	2.669	8.583	2.706	8.572	2.744	8.560	2.781	9
10	9.550	2.965	9.537	3.007	9.524	3.049	9.511	3.090	10
11	10.506	3.262	10.491	3.308	10.476	3.353	10.462	3.399	11
12	11.460	3.558	11.445	3.609	11.429	3.658	11.413	3.708	12
13	12.415	3.855	12.398	3.909	12.381	3.963	12.364	4.017	13
14	13.370	4.152	13.352	4.210	13.334	4.268	13.315	4.326	14
15	14.325	4.448	14.306	4.511	14.286	4.573	14.266	4.635	15
16	15.280	4.745	15.260	4.811	15.238	4.878	15.217	4.944	16
17	16.235	5.041	16.213	5.112	16.191	5.183	16.168	5.253	17
18	17.190	5.337	17.167	5.413	17.143	5.487	17.119	5.562	18
19	18.145	5.634	18.121	5.713	18.096	5.792	18.070	5.871	19
20	19.100	5.931	19.074	6.014	19.048	6.097	19.021	6.180	20
21	20.055	6.227	20.028	6.315	20.000	6.402	19.972	6.489	21
22	21.010	6.524	20.982	6.616	20.953	6.707	20.923	6.798	22
23	21.965	6.820	21.936	6.916	21.905	7.012	21.874	7.107	23
24	22.920	7.117	22.889	7.217	22.858	7.317	22.825	7.416	24
25	23.875	7.413	23.843	7.518	23.810	7.621	23.776	7.725	25
26	24.830	7.710	24.797	7.818	24.762	7.926	24.728	8.035	26
27	25.786	8.007	25.750	8.119	25.715	8.231	25.679	8.344	27
28	26.741	8.303	26.704	8.420	26.667	8.536	26.630	8.653	28
29	27.696	8.600	27.658	8.720	27.620	8.841	27.581	8.962	29
30	28.651	8.896	28.612	9.021	28.572	9.146	28.532	9.271	30
31	29.606	9.193	29.565	9.322	29.524	9.451	29.483	9.580	31
32	30.561	9.489	30.519	9.623	30.477	9.756	30.434	9.889	32
33	31.516	9.786	31.473	9.923	31.429	10.060	31.384	10.198	33
34	32.471	10.082	32.426	10.224	32.382	10.365	32.336	10.507	34
35	33.426	10.379	33.380	10.525	33.334	10.670	33.287	10.816	35
36	34.381	10.675	34.334	10.826	34.286	10.975	34.238	11.125	36
37	35.336	10.972	35.289	11.126	35.239	11.280	35.189	11.434	37
38	36.291	11.269	36.241	11.427	36.191	11.585	36.140	11.743	38
39	37.246	11.565	37.195	11.728	37.144	11.890	37.091	12.052	39
40	38.201	11.862	38.149	12.028	38.096	12.194	38.042	12.361	40
41	39.156	12.158	39.103	12.329	39.048	12.499	38.993	12.670	41
42	40.111	12.455	40.056	12.630	40.001	12.804	39.945	12.979	42
43	41.066	12.751	41.010	12.931	40.953	13.109	40.896	13.288	43
44	42.021	13.048	41.964	13.231	41.906	13.414	41.847	13.597	44
45	42.976	13.344	42.917	13.532	42.858	13.719	42.798	13.906	45
46	43.931	13.641	43.871	13.833	43.810	14.024	43.749	14.215	46
47	44.886	13.937	44.825	14.133	44.763	14.328	44.700	14.524	47
48	45.841	14.234	45.779	14.434	45.715	14.633	45.651	14.833	48
49	46.796	14.530	46.732	14.735	46.668	14.938	46.602	15.142	49
50	47.751	14.827	47.686	15.035	47.620	15.243	47.553	15.451	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	72 Degrees.								

Diſt.	17 Degrees.						18 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	48.706	15.124	48.640	15.336	48.572	15.548	48.504	15.760	51
52	49.661	15.420	49.593	15.637	49.523	15.853	49.455	16.069	52
53	50.616	15.717	50.547	15.938	50.477	16.158	50.406	16.378	53
54	51.571	16.013	51.501	16.238	51.430	16.462	51.357	16.687	54
55	52.526	16.310	52.455	16.539	52.382	16.767	52.308	16.996	55
56	53.481	16.606	53.408	16.840	53.334	17.072	53.259	17.305	56
57	54.436	16.903	54.362	17.140	54.287	17.377	54.210	17.614	57
58	55.391	17.199	55.316	17.441	55.239	17.682	55.161	17.923	58
59	56.346	17.496	56.269	17.742	56.192	17.987	56.113	18.232	59
60	57.301	17.792	57.223	18.043	57.144	18.292	57.064	18.541	60
61	58.256	18.089	58.177	18.343	58.096	18.596	58.015	18.850	61
62	59.211	18.385	59.131	18.644	59.049	18.901	58.966	19.159	62
63	60.166	18.682	60.084	18.945	60.001	19.206	59.917	19.468	63
64	61.121	18.979	61.038	19.245	60.954	19.511	60.868	19.777	64
65	62.076	19.275	61.992	19.546	61.906	19.816	61.819	20.086	65
66	63.031	19.572	62.946	19.847	62.858	20.121	62.770	20.395	66
67	63.986	19.868	63.899	20.148	63.811	20.426	63.721	20.704	67
68	64.941	20.165	64.853	20.448	64.763	20.730	64.672	21.013	68
69	65.896	20.461	65.807	20.749	65.716	21.035	65.623	21.322	69
70	66.851	20.758	66.760	21.050	66.668	21.340	66.574	21.631	70
71	67.806	21.054	67.714	21.350	67.620	21.645	67.525	21.940	71
72	68.761	21.351	68.668	21.651	68.571	21.950	68.476	22.249	72
73	69.716	21.647	69.622	21.952	69.525	22.255	69.427	22.558	73
74	70.671	21.944	70.575	22.253	70.478	22.560	70.378	22.867	74
75	71.626	22.240	71.529	22.553	71.430	22.864	71.329	23.176	75
76	72.582	22.537	72.483	22.854	72.382	23.169	72.281	23.486	76
77	73.537	22.834	73.436	23.155	73.335	23.474	73.232	23.795	77
78	74.492	23.130	74.390	23.455	74.287	23.779	74.183	24.104	78
79	75.447	23.427	75.344	23.756	75.240	24.084	75.134	24.413	79
80	76.402	23.723	76.298	24.057	76.192	24.389	76.085	24.722	80
81	77.357	24.020	77.251	24.358	77.144	24.694	77.036	25.031	81
82	78.312	24.316	78.205	24.658	78.097	24.999	77.987	25.340	82
83	79.267	24.613	79.159	24.959	79.049	25.303	78.938	25.649	83
84	80.222	24.909	80.112	25.260	80.002	25.608	79.889	25.958	84
85	81.177	25.206	81.066	25.560	80.954	25.913	80.840	26.267	85
86	82.132	25.502	82.020	25.861	81.906	26.218	81.791	26.576	86
87	83.087	25.799	82.974	26.162	82.859	26.523	82.742	26.885	87
88	84.042	26.096	83.927	26.462	83.811	26.828	83.693	27.194	88
89	84.997	26.392	84.881	26.763	84.764	27.133	84.644	27.503	89
90	85.952	26.689	85.835	27.064	85.716	27.437	85.595	27.812	90
91	86.917	26.985	86.789	27.365	86.668	27.742	86.546	28.121	91
92	87.862	27.282	87.742	27.665	87.621	28.047	87.498	28.430	92
93	88.817	27.578	88.696	27.966	88.573	28.352	88.449	28.739	93
94	89.772	27.875	89.650	28.267	89.526	28.657	89.400	29.048	94
95	90.727	28.171	90.603	28.567	90.478	28.962	90.351	29.357	95
96	91.682	28.468	91.557	28.868	91.430	29.267	91.302	29.666	96
97	92.637	28.764	92.511	29.169	92.383	29.571	92.253	29.975	97
98	93.592	29.061	93.465	29.470	93.335	29.876	93.204	30.284	98
99	94.547	29.357	94.418	29.770	94.288	30.181	94.155	30.593	99
100	95.502	29.654	95.372	30.071	95.240	30.486	95.106	30.902	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	72 Degrees.								

Dist.	18 Degrees.						19 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.950	0.313	0.948	0.317	0.947	0.321	0.946	0.326	1
2	1.899	0.626	1.897	0.635	1.894	0.643	1.891	0.651	2
3	2.849	0.939	2.845	0.952	2.841	0.964	2.837	0.977	3
4	3.799	1.253	3.793	1.269	3.788	1.286	3.782	1.302	4
5	4.748	1.566	4.742	1.586	4.735	1.607	4.728	1.628	5
6	5.698	1.879	5.690	1.904	5.682	1.929	5.673	1.953	6
7	6.648	2.192	6.638	2.221	6.629	2.250	6.619	2.279	7
8	7.598	2.505	7.587	2.538	7.575	2.572	7.564	2.605	8
9	8.547	2.818	8.535	2.856	8.522	2.893	8.510	2.930	9
10	9.497	3.132	9.483	3.173	9.469	3.214	9.455	3.256	10
11	10.447	3.445	10.432	3.490	10.410	3.536	10.401	3.581	11
12	11.396	3.758	11.380	3.808	11.363	3.857	11.346	3.907	12
13	12.346	4.071	12.328	4.125	12.310	4.179	12.292	4.232	13
14	13.296	4.384	13.276	4.442	13.257	4.500	13.237	4.558	14
15	14.245	4.697	14.225	4.759	14.204	4.822	14.183	4.884	15
16	15.195	5.011	15.175	5.077	15.151	5.143	15.128	5.209	16
17	16.145	5.324	16.121	5.394	16.098	5.464	16.074	5.535	17
18	17.095	5.637	17.070	5.711	17.045	5.786	17.019	5.860	18
19	18.044	5.950	18.018	6.029	17.992	6.107	17.965	6.186	19
20	18.994	6.263	18.966	6.346	18.939	6.429	18.910	6.511	20
21	19.944	6.576	19.915	6.663	19.886	6.750	19.856	6.837	21
22	20.893	6.890	20.863	6.981	20.832	7.072	20.801	7.163	22
23	21.843	7.203	21.811	7.298	21.779	7.393	21.747	7.488	23
24	22.793	7.516	22.760	7.615	22.726	7.715	22.692	7.814	24
25	23.742	7.829	23.708	7.932	23.673	8.036	23.638	8.139	25
26	24.692	8.142	24.656	8.250	24.620	8.357	24.584	8.465	26
27	25.642	8.455	25.605	8.567	25.567	8.679	25.529	8.790	27
28	26.592	8.768	26.553	8.884	26.514	9.000	26.475	9.116	28
29	27.541	9.082	27.501	9.202	27.461	9.322	27.420	9.442	29
30	28.491	9.395	28.450	9.519	28.408	9.643	28.366	9.767	30
31	29.441	9.708	29.398	9.836	29.355	9.965	29.311	10.093	31
32	30.390	10.021	30.346	10.154	30.302	10.286	30.257	10.418	32
33	31.340	10.334	31.295	10.471	31.249	10.608	31.202	10.744	33
34	32.290	10.647	32.243	10.788	32.196	10.929	32.148	11.069	34
35	33.239	10.961	33.191	11.105	33.143	11.250	33.093	11.395	35
36	34.189	11.274	34.140	11.423	34.089	11.572	34.039	11.721	36
37	35.139	11.587	35.088	11.740	35.036	11.893	34.984	12.046	37
38	36.089	11.900	36.036	12.057	35.983	12.215	35.930	12.372	38
39	37.038	12.213	36.984	12.375	36.930	12.536	36.875	12.697	39
40	37.988	12.526	37.933	12.692	37.877	12.858	37.821	13.023	40
41	38.938	12.840	38.881	13.009	38.824	13.179	38.766	13.348	41
42	39.887	13.153	39.829	13.327	39.771	13.500	39.712	13.674	42
43	40.837	13.466	40.778	13.644	40.718	13.822	40.657	14.000	43
44	41.787	13.779	41.726	13.961	41.665	14.143	41.603	14.325	44
45	42.736	14.092	42.674	14.278	42.612	14.465	42.548	14.651	45
46	43.686	14.405	43.623	14.596	43.559	14.786	43.494	14.976	46
47	44.636	14.719	44.571	14.913	44.506	15.108	44.439	15.302	47
48	45.586	15.032	45.519	15.230	45.453	15.429	45.385	15.627	48
49	46.535	15.345	46.468	15.548	46.400	15.751	46.330	15.953	49
50	47.485	15.658	47.416	15.865	47.346	16.072	47.276	16.278	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	71 Degrees.								

Dist.	18 Degrees.						19 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	48.435	15.971	48.364	16.182	48.293	16.393	48.222	16.604	51
52	49.384	16.284	49.313	16.500	49.240	16.715	49.167	16.930	52
53	50.234	16.597	50.261	16.817	50.187	17.036	50.113	17.255	53
54	51.284	16.911	51.209	17.134	51.134	17.358	51.058	17.581	54
55	52.233	17.224	52.158	17.451	52.081	17.679	52.004	17.906	55
56	53.183	17.537	53.106	17.769	53.028	18.001	52.949	18.232	56
57	54.133	17.850	54.054	18.086	53.975	18.322	53.895	18.557	57
58	55.083	18.163	55.003	18.403	54.922	18.644	54.840	18.883	58
59	56.032	18.476	55.951	18.721	55.869	18.965	55.786	19.209	59
60	56.982	18.790	56.899	19.038	56.816	19.286	56.731	19.534	60
61	57.932	19.103	57.848	19.355	57.763	19.608	57.677	19.860	61
62	58.881	19.416	58.796	19.673	58.710	19.929	58.622	20.185	62
63	59.831	19.729	59.744	19.990	59.657	20.251	59.568	20.511	63
64	60.781	20.042	60.692	20.307	60.604	20.572	60.513	20.836	64
65	61.730	20.355	61.641	20.624	61.550	20.894	61.459	21.162	65
66	62.680	20.669	62.589	20.942	62.497	21.215	62.404	21.488	66
67	63.630	20.982	63.537	21.259	63.444	21.536	63.350	21.813	67
68	64.580	21.295	64.480	21.576	64.391	21.858	64.295	22.139	68
69	65.529	21.608	65.434	21.894	65.338	22.179	65.241	22.464	69
70	66.479	21.921	66.382	22.211	66.285	22.501	66.186	22.790	70
71	67.429	22.234	67.331	22.528	67.232	22.822	67.132	23.115	71
72	68.378	22.548	68.279	22.846	68.179	23.144	68.077	23.441	72
73	69.328	22.861	69.227	23.163	69.126	23.465	69.023	23.767	73
74	70.278	23.174	70.176	23.480	70.073	23.787	69.968	24.092	74
75	71.227	23.487	71.124	23.797	71.020	24.108	70.914	24.418	75
76	72.177	23.800	72.072	24.115	71.967	24.429	71.860	24.743	76
77	73.127	24.113	73.021	24.432	72.914	24.751	72.805	25.069	77
78	74.077	24.426	73.969	24.749	73.861	25.072	73.751	25.394	78
79	75.026	24.740	74.917	25.067	74.807	25.394	74.696	25.720	79
80	75.976	25.053	75.866	25.384	75.754	25.715	75.642	26.045	80
81	76.926	25.366	76.814	25.701	76.701	26.037	76.587	26.371	81
82	77.875	25.679	77.762	26.019	77.648	26.358	77.533	26.697	82
83	78.825	25.992	78.711	26.336	78.595	26.680	78.478	27.022	83
84	79.775	26.305	79.659	26.653	79.542	27.001	79.424	27.348	84
85	80.724	26.619	80.607	26.970	80.489	27.322	80.369	27.673	85
86	81.674	26.932	81.556	27.288	81.436	27.644	81.315	27.999	86
87	82.624	27.245	82.504	27.605	82.383	27.965	82.260	28.325	87
88	83.574	27.558	83.452	27.922	83.330	28.287	83.206	28.650	88
89	84.523	27.871	84.400	28.240	84.277	28.608	84.151	28.976	89
90	85.473	28.184	85.349	28.557	85.224	28.930	85.097	29.301	90
91	86.423	28.498	86.297	28.874	86.171	29.251	86.042	29.627	91
92	87.372	28.811	87.245	29.192	87.118	29.572	86.988	29.952	92
93	88.322	29.124	88.194	29.509	88.064	29.894	87.933	30.278	93
94	89.272	29.437	89.142	29.826	89.011	30.215	88.879	30.603	94
95	90.221	29.750	90.090	30.143	89.958	30.537	89.824	30.929	95
96	91.171	30.063	91.039	30.461	90.905	30.858	90.770	31.255	96
97	92.121	30.377	91.987	30.778	91.852	31.180	91.715	31.580	97
98	93.071	30.690	92.935	31.095	92.799	31.501	92.661	31.906	98
99	94.020	31.003	93.884	31.413	93.746	31.823	93.606	32.231	99
100	94.970	31.316	94.832	31.730	94.693	32.144	94.552	32.557	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	71 Degrees.								

Dist.	19 Degrees.						20 Degrees.		Dist.
	15 Min.		30 Min		45 Min		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.944	0.330	0.943	0.334	0.941	0.338	0.940	0.342	1
2	1.888	0.659	1.885	0.668	1.882	0.676	1.879	0.684	2
3	2.832	0.989	2.828	1.001	2.824	1.014	2.819	1.026	3
4	3.776	1.319	3.771	1.335	3.765	1.352	3.759	1.368	4
5	4.720	1.648	4.713	1.669	4.706	1.690	4.698	1.710	5
6	5.665	1.978	5.656	2.003	5.647	2.028	5.638	2.052	6
7	6.609	2.308	6.598	2.330	6.588	2.365	6.578	2.394	7
8	7.553	2.638	7.641	2.670	7.529	2.703	7.518	2.736	8
9	8.497	2.967	8.484	3.004	8.471	3.041	8.457	3.078	9
10	9.441	3.297	9.426	3.338	9.412	3.379	9.397	3.420	10
11	10.385	3.627	10.369	3.672	10.353	3.717	10.337	3.762	11
12	11.329	3.956	11.312	4.006	11.294	4.055	11.276	4.104	12
13	12.273	4.286	12.254	4.340	12.235	4.393	12.216	4.446	13
14	13.217	4.616	13.197	4.673	13.177	4.731	13.156	4.788	14
15	14.161	4.945	14.140	5.007	14.118	5.069	14.095	5.130	15
16	15.105	5.275	15.082	5.341	15.059	5.407	15.035	5.472	16
17	16.050	5.605	16.025	5.675	16.000	5.745	15.975	5.814	17
18	16.994	5.934	16.968	6.009	16.941	6.083	16.914	6.156	18
19	17.938	6.264	17.910	6.342	17.882	6.420	17.854	6.498	19
20	18.882	6.594	18.853	6.676	18.824	6.758	18.794	6.840	20
21	19.826	6.925	19.795	7.010	19.765	7.096	19.733	7.182	21
22	20.770	7.253	20.738	7.344	20.706	7.434	20.673	7.524	22
23	21.714	7.583	21.681	7.678	21.647	7.772	21.613	7.866	23
24	22.658	7.913	22.623	8.011	22.588	8.110	22.553	8.208	24
25	23.602	8.242	23.566	8.345	23.529	8.448	23.492	8.550	25
26	24.546	8.572	24.509	8.679	24.471	8.786	24.432	8.893	26
27	25.490	8.902	25.451	9.013	25.412	9.124	25.372	9.235	27
28	26.435	9.231	26.394	9.347	26.353	9.462	26.311	9.577	28
29	27.379	9.561	27.337	9.680	27.294	9.800	27.251	9.919	29
30	28.323	9.891	28.279	10.014	28.235	10.138	28.191	10.261	30
31	29.267	10.220	29.222	10.348	29.177	10.476	29.130	10.603	31
32	30.211	10.550	30.164	10.682	30.118	10.813	30.070	10.945	32
33	31.155	10.880	31.107	11.016	31.059	11.151	31.010	11.287	33
34	32.099	11.209	32.050	11.350	32.000	11.489	31.949	11.629	34
35	33.043	11.539	32.992	11.683	32.941	11.827	32.889	11.971	35
36	33.987	11.869	33.935	12.017	33.882	12.165	33.829	12.313	36
37	34.931	12.199	34.878	12.351	34.824	12.503	34.769	12.655	37
38	35.875	12.528	35.820	12.685	35.765	12.841	35.708	12.997	38
39	36.820	12.858	36.763	13.019	36.706	13.179	36.648	13.339	39
40	37.764	13.188	37.706	13.352	37.647	13.517	37.588	13.681	40
41	38.708	13.517	38.648	13.686	38.588	13.855	38.527	14.023	41
42	39.652	13.847	39.591	14.020	39.530	14.193	39.468	14.365	42
43	40.596	14.177	40.534	14.354	40.471	14.531	40.407	14.707	43
44	41.540	14.506	41.476	14.688	41.412	14.868	41.346	15.049	44
45	42.484	14.836	42.419	15.021	42.353	15.206	42.286	15.391	45
46	43.428	15.166	43.361	15.355	43.294	15.544	43.226	15.733	46
47	44.372	15.495	44.304	15.689	44.235	15.882	44.165	16.075	47
48	45.316	15.825	45.247	16.023	45.177	16.220	45.105	16.417	48
49	46.260	16.155	46.189	16.357	46.118	16.558	46.045	16.759	49
50	47.204	16.484	47.132	16.690	47.059	16.896	46.984	17.101	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	70 Degrees.								

Diſt.	19 Degrees.						20 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	48.148	16.814	48.075	17.024	48.000	17.234	47.924	17.443	51
52	49.093	17.144	49.017	17.358	48.941	17.572	48.864	17.785	52
53	50.037	17.474	49.960	17.692	49.883	17.910	49.804	18.127	53
54	50.981	17.803	50.903	18.026	50.824	18.248	50.743	18.469	54
55	51.925	18.133	51.845	18.360	51.765	18.586	51.683	18.811	55
56	52.869	18.463	52.788	18.693	52.706	18.924	52.623	19.153	56
57	53.813	18.792	53.730	19.027	53.647	19.261	53.562	19.495	57
58	54.757	19.122	54.673	19.361	54.588	19.599	54.502	19.837	58
59	55.701	19.452	55.616	19.695	55.530	19.937	55.442	20.179	59
60	56.645	19.781	56.558	20.029	56.471	20.275	56.381	20.521	60
61	57.589	20.111	57.501	20.362	57.412	20.613	57.321	20.863	61
62	58.534	20.441	58.444	20.696	58.353	20.951	58.261	21.205	62
63	59.478	20.770	59.386	21.030	59.294	21.289	59.200	21.547	63
64	60.422	21.100	60.329	21.364	60.236	21.627	60.140	21.889	64
65	61.366	21.430	61.272	21.698	61.177	21.965	61.080	22.231	65
66	62.310	21.760	62.214	22.031	62.118	22.303	62.020	22.573	66
67	63.254	22.089	63.157	22.365	63.059	22.641	62.959	22.915	67
68	64.198	22.419	64.100	22.699	64.000	22.979	63.899	23.257	68
69	65.142	22.749	65.042	23.033	64.941	23.316	64.839	23.599	69
70	66.086	23.078	65.985	23.367	65.883	23.654	65.778	23.941	70
71	67.030	23.408	66.927	23.701	66.824	23.992	66.718	24.283	71
72	67.974	23.738	67.870	24.034	67.765	24.330	67.658	24.625	72
73	68.919	24.067	68.813	24.368	68.706	24.668	68.597	24.967	73
74	69.863	24.397	69.755	24.702	69.647	25.006	69.537	25.309	74
75	70.807	24.727	70.698	25.036	70.588	25.344	70.477	25.651	75
76	71.751	25.056	71.641	25.370	71.530	25.682	71.416	25.994	76
77	72.695	25.386	72.583	25.703	72.471	26.020	72.356	26.336	77
78	73.639	25.716	73.526	26.037	73.412	26.358	73.296	26.678	78
79	74.583	26.046	74.469	26.371	74.353	26.696	74.236	27.020	79
80	75.527	26.375	75.411	26.705	75.294	27.034	75.175	27.362	80
81	76.471	26.705	76.354	27.039	76.236	27.372	76.115	27.704	81
82	77.415	27.035	77.296	27.372	77.177	27.709	77.055	28.046	82
83	78.359	27.364	78.239	27.706	78.118	28.047	77.994	28.388	83
84	79.304	27.694	79.182	28.040	79.059	28.385	78.934	28.730	84
85	80.248	28.024	80.124	28.374	80.000	28.723	79.874	29.072	85
86	81.192	28.353	81.067	28.708	81.941	29.061	80.813	29.414	86
87	82.136	28,683	82.010	29.041	81.883	29.399	81.753	29.756	87
88	83.080	29.013	82.952	29.375	82.824	29.737	82.693	30.098	88
89	84.024	29.342	83.895	29.709	83.765	30.075	83.632	30.440	89
90	84.968	29.672	84.838	30.043	84.706	30.413	84.572	30.782	90
91	85.912	30.002	85.780	30.377	85.647	30.751	85.512	31.124	91
92	86.856	30.331	86.723	30.711	86.589	31.089	86.451	31.466	92
93	87.800	30.661	87.666	31.044	87.530	31.427	87.391	31.808	93
94	88.744	30.991	88.608	31.378	88.471	31.764	88.331	32.150	94
95	89.689	31.321	89.551	31.712	89.412	32.102	89.271	32.492	95
96	90.633	31.650	90.493	32.046	90.353	32.440	90.210	32.834	96
97	91.577	31.980	91.436	32.380	91.294	32.778	91.150	33.176	97
98	92.521	32.310	92.379	32.713	92.236	33.116	92.090	33.518	98
99	93.465	32.639	93.321	33.047	93.177	33.454	93.029	33.860	99
100	94.409	32.969	94.264	33.381	94.118	33.792	93.969	34.202	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	70 Degrees.								

Dist.	20 Degrees.						21 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.938	0.346	0.937	0.350	0.935	0.354	0.934	0.358	1
2	1.876	0.692	1.873	0.700	1.870	0.709	1.867	0.717	2
3	2.815	1.038	2.810	1.051	2.805	1.063	2.801	1.075	3
4	3.753	1.384	3.747	1.401	3.741	1.417	3.734	1.433	4
5	4.691	1.731	4.683	1.751	4.676	1.771	4.668	1.792	5
6	5.629	2.077	5.620	2.101	5.611	2.126	5.601	2.150	6
7	6.567	2.423	6.557	2.451	6.546	2.480	6.535	2.509	7
8	7.506	2.769	7.493	2.802	7.481	2.834	7.469	2.867	8
9	8.444	3.115	8.430	3.152	8.416	3.189	8.402	3.225	9
10	9.382	3.461	9.367	3.502	9.351	3.543	9.336	3.584	10
11	10.320	3.807	10.303	3.852	10.287	3.897	10.269	3.942	11
12	11.258	4.153	11.240	4.203	11.222	4.251	11.203	4.300	12
13	12.196	4.500	12.177	4.553	12.157	4.606	12.137	4.659	13
14	13.135	4.846	13.113	4.903	13.092	4.960	13.070	5.017	14
15	14.073	5.192	14.050	5.253	14.027	5.314	14.004	5.376	15
16	15.011	5.538	14.987	5.603	14.962	5.669	14.937	5.734	16
17	15.949	5.884	15.923	5.954	15.897	6.023	15.871	6.092	17
18	16.887	6.230	16.860	6.304	16.833	6.377	16.804	6.451	18
19	17.826	6.576	17.797	6.654	17.768	6.732	17.738	6.809	19
20	18.764	6.922	18.733	7.004	18.703	7.086	18.672	7.167	20
21	19.702	7.269	19.670	7.354	19.638	7.440	19.605	7.526	21
22	20.640	7.615	20.607	7.705	20.573	7.794	20.539	7.884	22
23	21.578	7.961	21.543	8.055	21.508	8.144	21.472	8.243	23
24	22.517	8.307	22.480	8.405	22.443	8.503	22.406	8.601	24
25	23.455	8.653	23.417	8.755	23.378	8.857	23.339	8.959	25
26	24.393	8.999	24.353	9.105	24.314	9.212	24.273	9.318	26
27	25.331	9.345	25.290	9.456	25.249	9.566	25.207	9.676	27
28	26.269	9.691	26.227	9.806	26.184	9.920	26.140	10.034	28
29	27.208	10.037	27.163	10.156	27.119	10.274	27.074	10.393	29
30	28.146	10.384	28.100	10.506	28.054	10.629	28.007	10.751	30
31	29.084	10.730	29.036	10.857	28.989	10.983	28.941	11.109	31
32	30.022	11.076	29.973	11.207	29.924	11.337	29.875	11.468	32
33	30.960	11.422	30.910	11.557	30.860	11.692	30.808	11.826	33
34	31.898	11.768	31.847	11.907	31.795	12.046	31.742	12.185	34
35	32.837	12.114	32.783	12.257	32.730	12.400	32.675	12.543	35
36	33.775	12.460	33.720	12.608	33.665	12.754	33.609	12.901	36
37	34.713	12.806	34.657	12.958	34.600	13.109	34.542	13.260	37
38	35.651	13.153	35.593	13.308	35.535	13.463	35.476	13.618	38
39	36.589	13.499	36.530	13.658	36.470	13.817	36.410	13.976	39
40	37.528	13.845	37.467	14.008	37.406	14.172	37.343	14.335	40
41	38.466	14.191	38.403	14.359	38.341	14.526	38.277	14.693	41
42	39.404	14.537	39.340	14.709	39.276	14.880	39.210	15.052	42
43	40.342	14.883	40.277	15.059	40.211	15.234	40.144	15.410	43
44	41.280	15.229	41.213	15.409	41.146	15.589	41.078	15.768	44
45	42.219	15.575	42.150	15.759	42.081	15.943	42.011	16.127	45
46	43.157	15.922	43.087	16.110	43.016	16.297	42.946	16.485	46
47	44.095	16.268	44.023	16.460	43.952	16.652	43.878	16.843	47
48	45.033	16.614	44.960	16.810	44.887	17.006	44.812	17.202	48
49	45.971	16.960	45.897	17.160	45.822	17.360	45.745	17.560	49
50	46.909	17.306	46.833	17.510	46.757	17.714	46.679	17.918	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	69 Degrees.								

Dist.	20 Degrees.						21 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	47.848	17.652	47.770	17.861	47.692	18.069	47.613	18.277	51
52	48.786	17.998	48.707	18.211	48.627	18.423	48.546	18.635	52
53	49.724	18.344	49.644	18.561	49.562	18.777	49.480	18.994	53
54	50.662	18.690	50.580	18.911	50.498	19.132	50.413	19.352	54
55	51.600	19.037	51.517	19.262	51.433	19.486	51.347	19.710	55
56	52.539	19.383	52.454	19.612	52.368	19.840	52.280	20.069	56
57	53.477	19.729	53.390	19.962	53.303	20.195	53.214	20.427	57
58	54.415	20.075	54.327	20.312	54.238	20.549	54.148	20.785	58
59	55.353	20.421	55.264	20.662	55.173	20.903	55.081	21.144	59
60	56.291	20.767	56.200	21.013	56.108	21.257	56.015	21.502	60
61	57.230	21.113	57.137	21.363	57.044	21.612	56.948	21.861	61
62	58.168	21.459	58.074	21.713	57.979	21.966	57.882	22.219	62
63	59.106	21.806	59.010	22.063	58.914	22.320	58.816	22.577	63
64	60.044	22.152	59.947	22.413	59.849	22.675	59.749	22.936	64
65	60.982	22.498	60.884	22.764	60.784	23.029	60.683	23.294	65
66	61.921	22.844	61.820	23.114	61.719	23.383	61.616	23.652	66
67	62.859	23.190	62.757	23.464	62.654	23.737	62.550	24.011	67
68	63.797	23.536	63.694	23.814	63.590	24.092	63.483	24.369	68
69	64.735	23.882	64.630	24.164	64.525	24.446	64.417	24.728	69
70	65.673	24.228	65.567	24.515	65.460	24.800	65.351	25.086	70
71	66.611	24.575	66.504	24.865	66.395	25.155	66.284	25.444	71
72	67.550	24.921	67.440	25.215	67.330	25.509	67.218	25.803	72
73	68.488	25.267	68.377	25.565	68.265	23.863	68.151	26.161	73
74	69.426	25.613	69.314	25.916	69.200	26.217	69.085	26.519	74
75	70.364	25.959	70.250	26.266	70.135	26.572	70.018	26.878	75
76	71.302	26.305	71.187	26.616	71.071	26.926	70.952	27.236	76
77	72.241	26.651	72.124	26.966	72.006	27.280	71.886	27.594	77
78	73.179	26.997	73.060	27.316	72.941	27.635	72.819	27.953	78
79	74.117	27.343	73.997	27.667	73.876	27.989	73.753	28.311	79
80	75.055	27.690	74.934	28.017	74.811	28.343	74.686	28.670	80
81	75.993	28.036	75.870	28.367	75.746	28.697	75.620	29.028	81
82	76.932	28.382	76.807	28.717	76.681	29.052	76.554	29.386	82
83	77.870	28.728	77.744	29.067	77.617	29.406	77.487	29.745	83
84	78.808	29.074	78.680	29.418	78.552	29.760	78.421	30.103	84
85	79.746	29.420	79.617	29.768	79.487	30.115	79.354	30.461	85
86	80.684	29.766	80.554	30.118	80.422	30.469	80.288	30.820	86
87	81.623	30.112	81.490	30.468	81.357	30.823	81.221	31.178	87
88	82.561	30.459	82.427	30.818	82.292	31.178	82.155	31.537	88
89	83.499	30.805	83.364	31.169	83.227	31.532	83.089	31.895	89
90	84.437	31.151	84.300	31.519	84.163	31.886	84.022	32.253	90
91	85.375	31.497	85.237	31.869	85.098	32.240	84.956	32.612	91
92	86.313	31.843	86.174	32.219	86.033	32.595	85.889	32.970	92
93	87.252	32.189	87.110	32.570	86.968	32.949	86.823	33.328	93
94	88.190	32.535	88.047	32.920	87.903	33.303	87.757	33.687	94
95	89.128	32.881	88.983	33.270	88.838	33.658	88.690	34.045	95
96	90.066	33.228	89.920	33.620	89.773	34.012	89.624	34.404	96
97	91.004	33.574	90.857	33.970	90.709	34.366	90.557	34.762	97
98	91.943	33.920	91.794	34.321	91.644	34.720	91.491	35.120	98
99	92.88	34.266	92.730	34.671	92.579	35.075	92.424	35.479	99
100	93.819	34.612	93.667	35.021	93.514	35.429	93.358	35.837	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	69 Degrees.								

Dist.	21 Degrees.						22 Degrees		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.932	0.362	0.930	0.366	0.929	0.371	0.927	0.375	1
2	1.864	0.725	1.861	0.733	1.858	0.741	1.854	0.749	2
3	2.796	1.087	2.791	1.099	2.786	1.112	2.782	1.124	3
4	3.728	1.450	3.722	1.466	3.715	1.482	3.709	1.498	4
5	4.660	1.81	4.652	1.832	4.644	1.853	4.636	1.873	5
6	5.592	2.175	5.583	2.199	5.573	2.223	5.563	2.248	6
7	6.524	2.537	6.513	2.565	6.502	2.594	6.490	2.622	7
8	7.456	2.900	7.443	2.932	7.430	2.964	7.417	2.997	8
9	8.388	3.262	8.374	3.298	8.359	3.335	8.345	3.371	9
10	9.320	3.624	9.304	3.665	9.288	3.706	9.272	3.746	10
11	10.252	3.987	10.235	4.031	10.217	4.076	10.199	4.121	11
12	11.184	4.349	11.165	4.398	11.146	4.447	11.120	4.495	12
13	12.116	4.712	12.095	4.764	12.075	4.817	12.053	4.870	13
14	13.048	5.074	13.026	5.131	13.003	5.188	12.981	5.245	14
15	13.980	5.437	13.956	5.497	13.932	5.558	13.908	5.619	15
16	14.912	5.799	14.887	5.864	14.861	5.929	14.835	5.994	16
17	15.844	6.161	15.817	6.230	15.790	6.300	15.762	6.368	17
18	16.776	6.524	16.748	6.597	16.719	6.670	16.689	6.743	18
19	17.708	6.886	17.678	6.963	17.647	7.041	17.616	7.118	19
20	18.640	7.249	18.608	7.330	18.576	7.411	18.544	7.492	20
21	19.572	7.621	19.539	7.696	19.505	7.782	19.471	7.867	21
22	20.504	7.974	20.469	8.063	20.434	8.152	20.398	8.241	22
23	21.436	8.336	21.400	8.429	21.363	8.523	21.325	8.616	23
24	22.368	8.699	22.330	8.796	22.291	8.893	22.252	8.991	24
25	23.300	9.061	23.260	9.162	23.220	9.264	23.179	9.365	25
26	24.232	9.423	24.191	9.529	24.149	9.635	24.107	9.740	26
27	25.164	9.786	25.121	9.895	25.078	10.005	25.034	10.114	27
28	26.096	10.148	26.052	10.262	26.007	10.376	25.961	10.489	28
29	27.028	10.511	26.982	10.628	26.935	10.746	26.888	10.864	29
30	27.960	10.873	27.913	10.995	27.864	11.117	27.815	11.238	30
31	28.892	11.236	28.843	11.361	28.793	11.487	28.743	11.613	31
32	29.824	11.598	29.773	11.728	29.722	11.858	29.670	11.988	32
33	30.756	11.961	30.704	12.094	30.651	12.228	30.597	12.362	33
34	31.688	12.323	31.634	12.461	31.580	12.599	31.524	12.737	34
35	32.620	12.685	32.565	12.82	32.508	12.970	32.451	13.111	35
36	33.552	13.048	33.495	13.194	33.437	13.340	33 378	13.486	36
37	34.484	13.410	34.426	13.560	34.366	13.711	34.306	13.861	37
38	35.416	13.773	35.356	13.927	35.295	14.081	35.233	14.235	38
39	36.348	14.135	36.286	14.293	36.224	14.452	36.160	14.610	39
40	37.280	14 498	37.217	14.660	37.152	14.822	37.087	14.984	40
41	38.212	14.860	38.147	15.026	38.08	15.193	38.014	15.359	41
42	39.144	15.222	39.078	15.393	39.010	15.564	38.942	15.734	42
43	40.076	15.585	40.008	15.759	39.939	15.934	39.869	16.108	43
44	41.008	15.947	40.938	16.126	40.868	16.305	40.796	16.483	44
46	41.940	16.310	41.869	16.492	41.796	16.675	41.723	16.857	45
46	42.872	16.672	42.799	16.859	42.725	17.046	42.650	17.232	46
47	43.804	17.035	43.730	17.225	43.654	17.416	43.577	17.607	47
48	44.736	17.397	44.660	17.592	44.583	17.787	44.505	17.981	48
49	45.668	17.760	45.591	17.958	45.512	18.157	45.432	18.356	49
50	46.600	18.122	46.521	18.325	46.440	18.528	46.359	18.730	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	68 Degrees.								

Dist.	21 Degrees.						22 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	47.533	18.484	47.451	18.691	47.369	18.899	47.286	19.105	51
52	48.465	18.847	48.382	19.058	48.298	19.269	48.213	19.480	52
53	49.397	19.209	49.312	19.424	49.227	19.640	49.141	19.854	53
54	50.329	19.572	50.243	19.791	50.156	20.010	50.068	20.229	54
55	51.261	19.934	51.173	20.157	51.085	20.381	50.995	20.604	55
56	52.193	20.297	52.104	20.524	52.013	20.751	51.922	20.978	56
57	53.125	20.659	53.034	20.890	52.942	21.122	52.849	21.353	57
58	54.057	21.022	53.964	21.257	53.871	21.492	53.776	21.727	58
59	54.989	21.384	54.895	21.623	54.800	21.863	54.704	22.102	59
60	55.921	21.746	55.825	21.990	55.729	22.234	55.631	22.477	60
61	56.853	22.109	56.756	22.356	56.657	22.604	56.558	22.851	61
62	57.785	22.471	57.686	22.723	57.586	22.975	57.485	23.226	62
63	58.717	22.834	58.616	23.089	58.515	23.345	58.412	23.600	63
64	59.649	23.196	59.547	23.456	59.444	23.716	59.340	23.975	64
65	60.581	23.559	60.477	23.822	60.373	24.086	60.267	24.350	65
66	61.513	23.921	61.408	24.189	61.301	24.457	61.194	24.724	66
67	62.445	24.283	62.338	24.555	62.230	24.828	62.121	25.099	67
68	63.377	24.646	63.269	24.922	63.159	25.198	63.048	25.473	68
69	64.309	25.008	64.199	25.288	64.088	25.569	63.975	25.848	69
70	65.241	25.371	65.129	25.655	65.017	25.939	64.903	26.223	70
71	66.173	25.733	66.060	26.021	65.946	26.310	65.830	26.597	71
72	67.105	26.096	66.990	26.388	66.874	26.680	66.757	26.972	72
73	68.037	26.458	67.921	26.754	67.803	27.051	67.684	27.347	73
74	68.969	26.821	68.851	27.121	68.732	27.421	68.611	27.721	74
75	69.901	27.183	69.781	27.487	69.661	27.792	69.538	28.096	75
76	70.833	27.545	70.712	27.854	70.590	28.163	70.466	28.470	76
77	71.765	27.908	71.642	28.220	71.518	28.533	71.393	28.845	77
78	72.697	28.270	72.573	28.587	72.447	28.904	72.320	29.220	78
79	73.629	28.633	73.503	28.953	73.376	29.274	73.247	29.594	79
80	74.561	28.995	74.434	29.320	74.305	29.645	74.174	29.969	80
81	75.493	29.358	75.364	29.686	75.234	30.015	75.102	30.343	81
82	76.425	29.720	76.294	30.053	76.162	30.386	76.029	30.718	82
83	77.357	30.083	77.225	30.419	77.091	30.756	76.956	31.093	83
84	78.289	30.445	78.155	30.786	78.020	31.127	77.883	31.467	84
85	79.221	30.807	79.086	31.152	78.949	31.498	78.810	31.842	85
86	80.153	31.170	80.016	31.519	79.878	31.868	79.737	32.216	86
87	81.085	31.532	80.947	31.885	80.806	32.239	80.665	32.591	87
88	82.017	31.895	81.877	32.252	81.735	32.609	81.592	32.965	88
89	82.949	32.257	82.807	32.618	82.664	32.980	82.519	33.340	89
90	83.881	32.620	83.738	32.985	83.593	33.350	83.446	33.715	90
91	84.813	32.982	84.668	33.351	84.522	33.721	84.373	34.089	91
92	85.745	33.344	85.599	33.718	85.451	34.092	85.301	34.464	92
93	86.677	33.707	86.529	34.084	86.379	34.462	86.228	34.839	93
94	87.609	34.069	87.459	34.451	87.308	34.833	87.155	35.213	94
95	88.541	34.432	88.390	34.817	88.237	35.203	88.082	35.588	95
96	89.473	34.794	89.320	35.184	89.166	35.574	89.009	35.963	96
97	90.405	35.157	90.251	35.550	90.095	35.944	89.936	36.337	97
98	91.337	35.519	91.181	35.917	91.023	36.315	90.864	36.712	98
99	92.269	35.882	92.112	36.283	91.952	36.685	91.791	37.086	99
100	93.201	36.244	93.042	36.650	92.881	37.056	92.718	37.461	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	68 Degrees.								

Diſt.	22 Degrees.						23 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.926	0.379	0.924	0.383	0.922	0.387	0.921	0.391	1
2	1.851	0.757	1.848	0.765	1.844	0.773	1.841	0.781	2
3	2.777	1.136	2.772	1.148	2.767	1.160	2.762	1.172	3
4	3.702	1.515	3.696	1.531	3.689	1.547	3.682	1.563	4
5	4.628	1.893	4.619	1.913	4.611	1.934	4.603	1.954	5
6	5.553	2.272	5.543	2.296	5.533	2.320	5.523	2.344	6
7	6.479	2.651	6.467	2.679	6.455	2.707	6.444	2.735	7
8	7.404	3.029	7.391	3.061	7.378	3.094	7.364	3.126	8
9	8.330	3.408	8.315	3.444	8.300	3.480	8.285	3.517	9
10	9.255	3.786	9.239	3.827	9.222	3.867	9.205	3.907	10
11	10.181	4.165	10.163	4.209	10.144	4.254	10.126	4.298	11
12	11.106	4.544	11.087	4.592	11.066	4.641	11.046	4.689	12
13	12.032	4.922	12.010	4.975	11.998	5.027	11.967	5.079	13
14	12.958	5.301	12.934	5.358	12.911	5.414	12.887	5.470	14
15	13.883	5.680	13.858	5.740	13.833	5.801	13.808	5.861	15
16	14.809	6.058	14.782	6.123	14.755	6.187	14.728	6.252	16
17	15.734	6.437	15.706	6.506	15.677	6.574	15.649	6.642	17
18	16.660	6.816	16.630	6.888	16.600	6.961	16.569	7.033	18
19	17.585	7.194	17.554	7.271	17.522	7.347	17.490	7.424	19
20	18.511	7.573	18.478	7.654	18.444	7.734	18.410	7.815	20
21	19.436	7.952	19.401	8.036	19.366	8.121	19.331	8.205	21
22	20.362	8.330	20.325	8.419	20.288	8.508	20.251	8.596	22
23	21.287	8.709	21.249	8.802	21.211	8.894	21.172	8.987	23
24	22.213	9.088	22.173	9.184	22.133	9.281	22.092	9.378	24
25	23.138	9.466	23.097	9.567	23.055	9.668	23.013	9.768	25
26	24.064	9.845	24.021	9.950	23.977	10.054	23.933	10.159	26
27	24.990	10.223	24.945	10.332	24.899	10.441	24.854	10.550	27
28	25.915	10.602	25.869	10.715	25.822	10.828	25.774	10.940	28
29	26.841	10.981	26.793	11.098	26.744	11.215	26.695	11.331	29
30	27.766	11.359	27.716	11.480	27.666	11.601	27.615	11.722	30
31	28.692	11.738	28.640	11.863	28.588	11.988	28.536	12.113	31
32	29.617	12.117	29.564	12.246	29.510	12.375	29.456	12.503	32
33	30.543	12.495	30.488	12.628	30.433	12.761	30.377	12.894	33
34	31.468	12.874	31.412	13.011	31.355	13.148	31.297	13.285	34
35	32.394	13.253	32.336	13.394	32.277	13.535	32.218	13.676	35
36	33.319	13.631	33.260	13.776	33.199	13.922	33.138	14.066	36
37	34.245	14.010	34.184	14.159	34.121	14.308	34.059	14.457	37
38	35.171	14.389	35.107	14.542	35.044	14.695	34.979	14.848	38
39	36.096	14.767	36.031	14.925	35.966	15.082	35.900	15.238	39
40	37.022	15.146	36.955	15.307	36.888	15.468	36.820	15.629	40
41	37.947	15.525	37.879	15.690	37.810	15.855	37.741	16.020	41
42	38.873	15.903	38.803	16.073	38.732	16.242	38.661	16.411	42
43	39.798	16.282	39.727	16.455	39.655	16.629	39.582	16.801	43
44	40.724	16.661	40.651	16.838	40.577	17.015	40.502	17.192	44
45	41.649	17.039	41.575	17.221	41.499	17.402	41.423	17.583	45
46	42.575	17.418	42.498	17.603	42.421	17.789	42.343	17.974	46
47	43.500	17.797	43.422	17.986	43.343	18.175	43.264	18.364	47
48	44.426	18.175	44.346	18.369	44.266	18.562	44.184	18.755	48
49	45.351	18.554	45.270	18.751	45.188	18.949	45.105	19.146	49
50	46.277	18.932	46.194	19.134	46.110	19.335	46.025	19.536	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	67 Degrees.								

Dist.	22 Degrees.						23 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	47.203	19.311	47.118	19.517	47.032	19.722	46.945	19.927	51
52	48.128	19.690	48.042	19.899	47.954	20.109	47.866	20.318	52
53	49.054	20.068	48.966	20.282	48.877	20.496	48.787	20.709	53
54	49.979	20.447	49.890	20.665	49.799	20.882	49.707	21.099	54
55	50.905	20.826	50.813	21.047	50.721	21.269	50.628	21.490	55
56	51.830	21.204	51.737	21.430	51.643	21.656	51.548	21.881	56
57	52.756	21.583	52.661	21.813	52.565	22.042	52.469	22.272	57
58	53.681	21.962	53.585	22.195	53.488	22.429	53.389	22.662	58
59	54.607	22.340	54.509	22.578	54.410	22.816	54.310	23.053	59
60	55.532	22.719	55.433	22.961	55.332	23.203	55.230	23.444	60
61	56.458	23.098	56.357	23.343	56.254	23.589	56.151	23.835	61
62	57.383	23.476	57.281	23.726	57.176	23.976	57.071	24.225	62
63	58.309	23.855	58.204	24.109	58.099	24.363	57.992	24.616	63
64	59.235	24.234	59.128	24.492	59.021	24.749	58.912	25.007	64
65	60.160	24.612	60.052	24.874	59.943	25.136	59.833	25.397	65
66	61.086	24.991	60.976	25.257	60.865	25.523	60.753	25.788	66
67	62.011	25.370	61.900	25.640	61.787	25.910	61.674	26.179	67
68	62.937	25.748	62.824	26.022	62.710	26.296	62.594	26.570	68
69	63.862	26.127	63.748	26.405	63.632	26.683	63.515	26.960	69
70	64.788	26.505	64.672	26.788	64.554	27.070	64.435	27.351	70
71	65.713	26.884	65.595	27.170	65.476	27.456	65.356	27.742	71
72	66.639	27.263	66.519	27.553	66.398	27.843	66.276	28.133	72
73	67.564	27.641	67.443	27.936	67.321	28.230	67.197	28.523	73
74	68.490	28.020	68.367	28.318	68.243	28.617	68.117	28.914	74
75	69.415	28.399	69.291	28.701	69.165	29.003	69.038	29.305	75
76	70.341	28.777	70.215	29.084	70.087	29.390	69.958	29.695	76
77	71.267	29.156	71.139	29.466	71.009	29.777	70.879	30.086	77
78	72.192	29.535	72.063	29.849	71.932	30.163	71.799	30.477	78
79	73.118	29.913	72.987	30.232	72.854	30.550	72.720	30.868	79
80	74.043	30.292	73.910	30.614	73.776	30.937	73.640	31.258	80
81	74.969	30.671	74.834	30.997	74.698	31.324	74.561	31.649	81
82	75.894	31.049	75.758	31.380	75.620	31.710	75.481	32.040	82
83	76.820	31.428	76.682	31.762	76.543	32.097	76.402	32.431	83
84	77.745	31.807	77.606	32.145	77.465	32.484	77.322	32.821	84
85	78.671	32.185	78.530	32.528	78.387	32.870	78.243	33.212	85
86	79.596	32.564	79.454	32.910	79.309	33.257	79.163	33.603	86
87	80.522	32.943	80.378	33.293	80.231	33.644	80.084	33.994	87
88	81.448	33.321	81.301	33.676	81.154	34.030	81.004	34.384	88
89	82.373	33.700	82.225	34.059	82.076	34.417	81.925	34.775	89
90	83.299	34.078	83.149	34.441	82.998	34.804	82.845	35.166	90
91	84.224	34.457	84.073	34.824	83.920	35.191	83.766	35.556	91
92	85.150	34.836	84.997	35.207	84.842	35.577	84.686	35.947	92
93	86.075	35.214	85.921	35.589	85.765	35.964	85.607	36.338	93
94	87.001	35.593	86.845	35.972	86.687	36.351	86.527	36.729	94
95	87.926	35.972	87.769	36.355	87.609	36.737	87.448	37.119	95
96	88.852	36.350	88.692	36.737	88.531	37.124	88.368	37.510	96
97	89.777	36.729	89.616	37.120	89.453	37.511	89.289	37.901	97
98	90.703	37.108	90.540	37.503	90.376	37.898	90.209	38.292	98
99	91.628	37.486	91.464	37.885	91.298	38.284	91.130	38.682	99
100	92.554	37.865	92.388	38.268	92.220	38.671	92.050	39.073	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	67 Degrees.								

Dist.	23 Degrees.						24 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.919	0.395	0.917	0.399	0.915	0.403	0.914	0.407	1
2	1.838	0.789	1.834	0.797	1.831	0.805	1.827	0.813	2
3	2.756	1.184	2.751	1.196	2.746	1.208	2.741	1.220	3
4	3.675	1.579	3.668	1.595	3.661	1.611	3.654	1.627	4
5	4.594	1.974	4.585	1.994	4.577	2.014	4.568	2.034	5
6	5.513	2.368	5.502	2.392	5.492	2.416	5.481	2.440	6
7	6.432	2.763	6.419	2.791	6.407	2.819	6.395	2.847	7
8	7.350	3.158	7.336	3.190	7.322	3.222	7.308	3.254	8
9	8.269	3.553	8.254	3.589	8.238	3.625	8.222	3.661	9
10	9.188	3.947	9.171	3.987	9.153	4.027	9.135	4.067	10
11	10.107	4.342	10.088	4.386	10.068	4.430	10.049	4.474	11
12	11.025	4.737	11.005	4.785	10.984	4.833	10.963	4.881	12
13	11.944	5.132	11.922	5.184	11.899	5.236	11.876	5.288	13
14	12.863	5.526	12.839	5.582	12.814	5.638	12.799	5.694	14
15	13.782	5.921	13.756	5.981	13.730	6.041	13.703	6.101	15
16	14.701	6.316	14.673	6.380	14.645	6.444	14.617	6.508	16
17	15.619	6.711	15.590	6.779	15.560	6.847	15.530	6.915	17
18	16.538	7.105	16.507	7.177	16.476	7.249	16.444	7.321	18
19	17.457	7.500	17.424	7.576	17.391	7.652	17.357	7.728	19
20	18.376	7.895	18.341	7.975	18.306	8.055	18.271	8.135	20
21	19.295	8.290	19.258	8.374	19.222	8.458	19.184	8.541	21
22	20.213	8.684	20.175	8.772	20.137	8.860	20.098	8.948	22
23	21.132	9.079	21.092	9.171	21.052	9.263	21.012	9.355	23
24	22.051	9.474	22.009	9.570	21.967	9.666	21.925	9.762	24
25	32.970	9.869	22.926	9.969	22.883	10.069	22.839	10.168	25
26	23.889	10.263	23.844	10.367	23.798	10.471	23.752	10.575	26
27	24.807	10.658	24.761	10.766	24.713	10.874	24.666	10.982	27
28	25.726	11.053	25.678	11.165	25.629	11.277	25.579	11.389	28
29	26.645	11.448	26.595	11.564	26.544	11.680	26.493	11.795	29
30	27.564	11.842	27.512	11.962	27.459	12.082	27.406	12.202	30
31	28.482	12.237	28.429	12.361	28.375	12.485	28.320	12.609	31
32	29.401	12.632	29.346	12.760	29.290	12.888	29.233	13.016	32
33	30.320	13.027	30.263	13.159	30.205	13.291	30.147	13.422	33
34	31.239	13.421	31.180	13.557	31.121	13.693	31.061	13.829	34
35	32.158	13.816	32.097	13.956	32.036	14.096	31.974	14.236	35
36	33.076	14.211	33.014	14.355	32.951	14.499	32.888	14.643	36
37	33.995	14.606	33.931	14.754	33.866	14.902	33.801	15.049	37
38	34.914	15.000	34.848	15.152	34.782	15.304	34.715	15.456	38
39	35.833	15.395	35.765	15.551	35.697	15.707	35.628	15.863	39
40	36.752	15.790	36.682	15.950	36.612	16.110	36.542	16 269	40
41	37.670	16.185	37.599	16.349	37.528	16.513	37.455	16.676	41
42	38.589	16.579	38.517	16.747	38.443	16.915	38.369	17.083	42
43	39.508	16.974	39.434	17.146	39.358	17.318	39.282	17.490	43
44	40.427	17.369	40.351	17.545	40.274	17.721	40.196	17.896	44
45	41.346	17.763	41.268	17.944	41.189	18.124	41.110	18.303	45
46	42.264	18.158	42.185	18.342	42.104	18.526	42.023	18.710	46
47	43.183	18.553	43.102	18.741	43.020	18.929	42.937	19.117	47
48	44.102	18.948	44.019	19.140	43.935	19.332	43.850	19.523	48
49	45.021	19 342	44.936	19.539	44.850	19.735	44.764	19.930	49
50	45.939	19.737	45.853	19.937	45.765	20.137	45.677	20.337	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	66 Degrees.								

Dist.	23 Degrees.						24 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	46.858	20.132	46.770	20.336	46.681	20.540	46.591	20.744	51
52	47.777	20.527	47.687	20.735	47.596	20.943	47.504	21.150	52
53	48.696	20.921	48.604	21.134	48.511	21.346	48.418	21.557	53
54	49.615	21.316	49.521	21.532	49.427	21.748	49.331	21.964	54
55	50.533	21.711	50.438	21.931	50.342	22.151	50.245	22.371	55
56	51.452	22.106	51.355	22.330	51.257	22.554	51.159	22.777	56
57	52.371	22.500	52.272	22.729	52.173	22.957	52.072	23.184	57
58	53.290	22.895	53.189	23.127	53.088	23.359	52.986	23.591	58
59	54.209	23.290	54.107	23.526	54.003	23.762	53.899	23.997	59
60	55.127	23.685	55.024	23.925	54.919	24.165	54.813	24.404	60
61	56.046	24.079	55.941	24.324	55.834	24.568	55.726	24.811	61
62	56.965	24.474	56.858	24.722	56.749	24.970	56.640	25.218	62
63	57.884	24.869	57.775	25.121	57.665	25.373	57.553	25.624	63
64	58.803	25.264	58.692	25.520	58.580	25.776	58.467	26.031	64
65	59.721	25.658	59.609	25.919	59.495	26.179	59.380	26.438	65
66	60.640	26.053	60.526	26.317	60.410	26.581	60.294	26.845	66
67	61.559	26.448	61.443	26.716	61.326	26.984	61.208	27.251	67
68	62.478	26.843	62.360	27.115	62.241	27.387	62.121	27.658	68
69	63.397	27.237	63.277	27.514	63.156	27.790	63.035	28.065	69
70	64.315	27.632	64.194	27.912	64.072	28.192	63.948	28.472	70
71	65.234	28.027	65.111	28.311	64.987	28.595	64.862	28.878	71
72	66.153	28.422	66.028	28.710	65.902	28.998	65.775	29.285	72
73	67.072	28.816	66.945	29.109	66.818	29.401	66.689	29.692	73
74	67.990	29.211	67.862	29.507	67.733	29.803	67.602	30.099	74
75	68.909	29.606	68.779	29.906	68.648	30.206	68.516	30.505	75
76	69.828	30.001	69.697	30.305	69.564	30.609	69.429	30.912	76
77	70.747	30.395	70.614	30.704	70.479	31.012	70.343	31.319	77
78	71.666	30.790	71.531	31.102	71.394	31.414	71.257	31.725	78
79	72.584	31.185	72.448	31.501	72.309	31.817	72.170	32.132	79
80	73.503	31.580	73.365	31.900	73.225	32.220	73.084	32.539	80
81	74.422	31.974	74.282	32.299	74.140	32.623	73.997	32.946	81
82	75.341	32.369	75.199	32.697	75.055	33.025	74.911	33.352	82
83	76.260	32.764	76.116	33.096	75.971	33.428	75.824	33.759	83
84	77.178	33.158	77.033	33.495	76.886	33.831	76.738	34.166	84
85	78.097	33.553	77.950	33.894	77.801	34.233	77.651	34.573	85
86	79.016	33.948	78.867	34.292	78.717	34.636	78.565	34.979	86
87	79.935	34.343	79.784	34.691	79.632	35.039	79.479	35.386	87
88	80.854	34.737	80.701	35.090	80.547	35.442	80.392	35.793	88
89	81.772	35.132	81.618	35.489	81.463	35.844	81.306	36.200	89
90	82.691	35.527	82.535	35.887	82.378	36.247	82.219	36.606	90
91	83.610	35.922	83.452	36.286	83.293	36.650	83.133	37.013	91
92	84.529	36.316	84.370	36.685	84.209	37.053	84.046	37.420	92
93	85.447	36.711	85.287	37.084	85.124	37.455	84.960	37.827	93
94	86.366	37.106	86.204	37.482	86.039	37.858	85.873	38.233	94
95	87.285	37.501	87.121	37.881	86.954	38.261	86.787	38.640	95
96	88.204	37.895	88.038	38.280	87.870	38.664	87.700	39.047	96
97	89.123	38.290	88.955	38.679	88.785	39.066	88.614	39.453	97
98	90.041	38.685	89.872	39.077	89.700	39.469	89.528	39.860	98
99	90.960	39.080	90.789	39.476	90.616	39.872	90.441	40.267	99
100	91.870	39.474	91.706	39.875	91.531	40.275	91.355	40.674	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	66 Degrees.								

Dist.	24 Degrees.						25 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.912	0.411	0.910	0.415	0.908	0.419	0.906	0.423	1
2	1.824	0.821	1.820	0.829	1.816	0.837	1.813	0.845	2
3	2.735	1.232	2.730	1.244	2.724	1.256	2.719	1.268	3
4	3.647	1.643	3.640	1.659	3.633	1.675	3.625	1.690	4
5	4.559	2.054	4.55[illegible]	2.073	4.541	2.093	4.532	2.113	5
6	5.471	2.464	5.460	2.488	5.449	2.512	5.438	2.536	6
7	6.382	2.875	6.370	2.903	6.357	2.931	6.344	2.958	7
8	7.294	3.286	7.280	3.318	7.265	3.349	7.250	3.381	8
9	8.206	3.696	8.190	3.732	8.173	3.768	8.157	3.804	9
10	9.118	4.107	9.100	4.147	9.081	4.187	9.063	4.226	10
11	10.029	4.518	10.010	4.562	9.990	4.605	9.969	4.649	11
12	10.941	4.929	10.920	4.976	10.898	5.024	10.876	5.071	12
13	11.853	5.339	11.829	5.391	11.806	5.443	11.782	5.494	13
14	12.765	5.750	12.739	5.806	12.714	5.861	12.688	5.917	14
15	13.676	6.161	13.649	6.220	13.622	6.280	13.595	6.339	15
16	14.588	6.572	14.559	6.635	14.530	6.699	14.501	6.762	16
17	15.500	6.982	15.469	7.050	15.438	7.117	15.407	7.185	17
18	16.412	7.393	16.379	7.464	16.347	7.536	16.314	7.607	18
19	17.323	7.804	17.289	7.879	17.255	7.955	17.220	8.030	19
20	18.235	8.214	18.199	8.294	18.163	8.373	18.126	8.452	20
21	19.147	8.625	19.109	8.709	19.071	8.792	19.032	8.875	21
22	20.059	9.036	20.019	9.123	19.979	9.211	19.939	9.298	22
23	20.971	9.447	20.929	9.538	20.887	9.629	20.845	9.720	23
24	21.882	9.857	21.839	9.953	21.795	10.048	21.751	10.143	24
25	22.794	10.268	22.749	10.367	22.704	10.466	22.658	10.565	25
26	23.706	10.679	23.659	10.782	23.612	10.885	23.564	10.988	26
27	24.618	11.089	24.569	11.197	24.520	11.304	24.470	11.411	27
28	25.529	11.500	25.479	11.611	25.428	11.722	25.377	11.833	28
29	26.441	11.911	26.389	12.026	26.336	12.141	26.283	12.256	29
30	27.353	12.322	27.299	12.441	27.244	12.560	27.189	12.679	30
31	28.265	12.732	28.209	12.855	28.152	12.978	28.096	13.101	31
32	29.176	13.143	29.119	13.270	29.061	13.397	29.002	13.524	32
33	30.088	13.554	30.029	13.685	29.969	13.816	29.908	13.946	33
34	31.000	13.964	30.939	14.099	30.877	14.234	30.814	14.369	34
35	31.912	14.375	31.849	14.514	31.785	14.653	31.721	14.792	35
36	32.823	14.786	32.759	14.929	32.693	15.072	32.627	15.214	36
37	33.735	15.197	33.669	15.344	33.601	15.490	33.533	15.637	37
38	34.647	15.607	34.578	15.758	34.509	15.909	34.440	16.059	38
39	35.559	16.018	35.488	16.173	35.418	16.328	35.346	16.482	39
40	36.470	16.429	36.398	16.588	36.326	16.746	36.252	16.905	40
41	37.382	16.840	37.308	17.002	37.234	17.165	37.159	17.327	41
42	38.294	17.250	38.218	17.417	38.142	17.584	38.065	17.750	42
43	39.206	17.661	39.128	17.832	39.050	18.002	38.971	18.173	43
44	40.118	18.072	40.038	18.246	39.958	18.421	39.878	18.595	44
45	41.029	18.482	40.948	18.661	40.866	18.840	40.784	19.018	45
46	41.941	18.893	41.858	19.076	41.775	19.258	41.690	19.440	46
47	42.853	19.304	42.768	19.491	42.683	19.677	42.596	19.863	47
48	43.765	19.715	43.678	19.905	43.591	20.096	43.503	20.286	48
49	44.676	20.125	44.588	20.320	44.499	20.514	44.409	20.708	49
50	45.588	20.536	45.498	20.735	45.407	20.933	45.315	21.131	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	65 Degrees.								

Dist.	24 Degrees.						25 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	46.500	20.947	46.408	21.149	46.315	21.352	46.222	21.554	51
52	47.412	21.357	47.318	21.564	47.223	21.770	47.128	21.976	52
53	48.323	21.768	48.228	21.979	48.132	22.189	48.034	22.399	53
54	49.235	22.179	49.138	22.393	49.040	22.608	48.941	22.821	54
55	50.147	22.590	50.048	22.808	49.948	23.026	49.847	23.244	55
56	51.059	23.000	50.958	23.223	50.856	23.445	50.753	23.667	56
57	51.970	23.411	51.868	23.638	51.764	23.864	51.660	24.089	57
58	52.882	23.822	52.778	24.052	52.672	24.282	52.567	24.512	58
59	53.794	24.232	53.688	24.467	53.580	24.701	53.472	24.934	59
60	54.706	24.643	54.598	24.881	54.489	25.120	54.378	25.357	60
61	55.617	25.054	55.508	25.296	55.397	25.538	55.285	25.780	61
62	56.529	25.465	56.418	25.711	56.305	25.957	56.191	26.202	62
63	57.441	25.875	57.327	26.126	57.213	26.376	57.097	26.625	63
64	58.353	26.286	58.237	26.540	58.121	26.794	58.004	27.048	64
65	59.265	26.697	59.147	26.955	59.029	27.213	58.910	27.470	65
66	60.176	27.108	60.057	27.370	59.937	27.632	59.846	27.893	66
67	61.088	27.518	60.967	27.784	60.846	28.050	60.723	28.315	67
68	62.000	27.929	61.877	28.199	61.754	28.469	61.629	28.738	68
69	62.912	28.340	62.787	28.614	62.662	28.888	62.535	29.161	69
70	63.823	28.750	63.697	29.029	63.570	29.306	63.442	29.583	70
71	64.735	29.161	64.607	29.443	64.478	29.725	64.348	30.006	71
72	65.647	29.572	65.517	29.858	65.386	30.144	65.254	30.428	72
73	66.559	29.983	66.427	30.273	66.294	30.562	66.160	30.851	73
74	67.470	30.393	67.337	30.687	67.203	30.981	67.067	31.274	74
75	68.382	30.804	68.247	31.102	68.111	31.399	67.973	31.696	75
76	69.294	31.215	69.157	31.517	69.019	31.818	68.879	32.119	76
77	70.206	31.625	70.067	31.931	69.927	32.237	69.786	32.542	77
78	71.117	32.036	70.977	32.346	70.835	32.655	70.692	32.964	78
79	72.029	32.447	71.887	32.761	71.743	33.074	71.598	33.387	79
80	72.941	32.858	72.797	33.175	72.651	33.493	72.505	33.809	80
81	73.853	33.268	73.707	33.590	73.560	33.911	73.411	34.232	81
82	74.764	33.679	74.617	34.005	74.468	34.330	74.317	34.655	82
83	75.676	34.090	75.527	34.420	75.376	34.749	75.224	35.077	83
84	76.588	34.500	76.437	34.834	76.284	35.167	76.130	35.500	84
85	77.500	34.911	77.347	35.249	77.192	35.586	77.036	35.923	85
86	78.412	35.322	78.257	35.664	78.100	36.005	77.942	36.345	86
87	79.323	35.733	79.167	36.078	79.008	36.423	78.849	36.768	87
88	80.235	36.143	80.076	36.493	79.917	36.842	79.755	37.190	88
89	81.147	36.554	80.986	36.908	80.825	37.261	80.661	37.613	89
90	82.059	36.965	81.896	37.322	81.733	37.679	81.568	38.036	90
91	82.970	37.376	82.806	37.737	82.641	38.098	82.474	38.458	91
92	83.882	37.786	83.716	38.152	83.549	38.517	83.380	38.881	92
93	84.794	38.197	84.626	38.566	84.457	38.935	84.287	39.303	93
94	85.706	38.608	85.536	38.981	85.365	39.354	85.193	39.726	94
95	86.617	39.018	86.446	39.396	86.274	39.773	86.099	40.149	95
96	87.529	39.429	87.356	39.811	87.182	40.191	87.006	40.571	96
97	88.441	39.840	88.266	40.225	88.090	40.610	87.912	40.994	97
98	89.353	40.251	89.176	40.640	88.998	41.029	88.818	41.417	98
99	90.264	40.661	90.086	41.055	89.906	41.447	89.724	41.839	99
100	91.176	41.072	90.996	41.469	90.814	41.866	90.631	42.262	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	65 Degrees.								

Dist.	25 Degrees.						26 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.904	0.427	0.903	0.431	0.901	0.434	0.899	0.438	1
2	1.809	0.853	1.805	0.861	1.801	0.869	1.798	0.877	2
3	2.713	1.280	2.708	1.292	2.702	1.303	2.696	1.315	3
4	3.618	1.706	3.610	1.722	3.603	1.738	3.595	1.753	4
5	4.522	2.133	4.513	2.153	4.503	2.172	4.494	2.192	5
6	5.427	2.559	5.416	2.583	5.404	2.607	5.393	2.630	6
7	6.331	2.986	6.318	3.014	6.305	3.041	6.292	3.069	7
8	7.236	3.413	7.221	3.444	7.206	3.476	7.190	3.507	8
9	8.140	3.839	8.123	3.875	8.106	3.910	8.089	3.945	9
10	9.045	4.266	9.026	4.305	9.007	4.344	8.988	4.384	10
11	9.949	4.692	9.928	4.736	9.908	4.779	9.887	4.822	11
12	10.853	5.119	10.831	5.166	10.808	5.213	10.786	5.260	12
13	11.758	5.545	11.734	5.597	11.709	5.648	11.684	5.699	13
14	12.662	5.972	12.636	6.027	12.610	6.082	12.583	6.137	14
15	13.567	6.399	13.539	6.458	13.510	6.517	13.482	6.576	15
16	14.471	6.825	14.441	6.888	14.411	6.951	14.381	7.014	16
17	15.376	7.252	15.344	7.319	15.312	7.386	15.279	7.452	17
18	16.280	7.678	16.247	7.749	16.213	7.820	16.178	7.891	18
19	17.185	8.105	17.149	8.180	17.113	8.254	17.077	8.329	19
20	18.089	8.531	18.052	8.610	18.014	8.689	17.976	8.767	20
21	18.994	8.958	18.954	9.041	18.915	9.123	18.875	9.206	21
22	19.898	9.385	19.857	9.471	19.815	9.558	19.773	9.644	22
23	20.802	9.811	20.759	9.902	20.716	9.992	20.672	10.083	23
24	21.707	10.238	21.662	10.332	21.617	10.427	21.571	10.521	24
25	22.611	10.664	22.565	10.763	22.517	10.861	22.470	10.959	25
26	23.516	11.091	23.467	11.193	23.418	11.296	23.369	11.398	26
27	24.420	11.517	24.370	11.624	24.319	11.730	24.267	11.836	27
28	25.325	11.944	25.272	12.054	25.220	12.164	25.166	12.274	28
29	26.229	12.371	26.175	12.485	26.120	12.599	26.065	12.713	29
30	27.134	12.797	27.078	12.915	27.021	13.033	26.964	13.151	30
31	28.038	13.224	27.980	13.346	27.922	13.468	27.863	13.590	31
32	28.943	13.650	28.883	13.776	28.822	13.902	28.761	14.028	32
33	29.847	14.077	29.785	14.207	29.723	14.337	29.660	14.466	33
34	30.751	14.503	30.688	14.637	30.624	14.771	30.559	14.905	34
35	31.656	14.930	31.590	15.068	31.524	15.206	31.458	15.343	35
36	32.560	15.356	32.493	15.498	32.425	15.640	32.357	15.781	36
37	33.465	15.783	33.396	15.929	33.326	16.074	33.255	16.220	37
38	34.369	16.210	34.298	16.359	34.227	16.509	34.154	16.658	38
39	35.274	16.636	35.201	16.790	35.127	16.943	35.053	17.096	39
40	36.178	17.063	36.103	17.220	36.028	17.378	35.952	17.535	40
41	37.083	17.489	37.006	17.651	36.929	17.812	36.851	17.973	41
42	37.987	17.916	37.909	18.081	37.829	18.247	37.749	18.412	42
43	38.892	18.342	38.811	18.512	38.730	18.681	38.648	18.850	43
44	39.796	18.769	39.714	18.942	39.631	19.116	39.547	19.288	44
45	40.700	19.196	40.616	19.373	40.531	19.550	40.446	19.727	45
46	41.605	19.622	41.519	19.804	41.432	19.984	41.345	20.165	46
47	42.509	20.049	42.421	20.234	42.333	20.419	42.243	20.603	47
48	43.414	20.475	43.324	20.665	43.234	20.853	43.142	21.042	48
49	44.318	20.902	44.227	21.095	44.134	21.288	44.041	21.480	49
50	45.223	21.328	45.129	21.526	45.035	21.722	44.940	21.919	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	64 Degrees.								

Dist.	25 Degrees.						26 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	46.127	21.755	46.032	21.950	45.936	22.157	45.838	22.357	51
52	47.032	22.182	46.934	22.387	46.836	22.591	46.737	22.795	52
53	47.936	22.608	47.837	22.817	47.737	23.026	47.636	23.234	53
54	48.841	23.035	48.740	23.248	48.638	23.460	48.534	23.672	54
55	49.745	23.461	49.642	23.678	49.538	23.894	49.434	24.110	55
56	50.649	23.888	50.545	24.109	50.439	24.329	50.332	24.549	56
57	51.554	24.314	51.447	24.539	51.340	24.763	51.231	24.987	57
58	52.458	24.741	52.350	24.970	52.240	25.198	52.130	25.426	58
59	53.363	25.168	53.253	25.400	53.141	25.632	53.029	25.864	59
60	54.267	25.594	54.155	25.831	54.042	26.067	53.928	26.302	60
61	55.172	26.021	55.058	26.261	54.943	26.501	54.826	26.741	61
62	56.076	26.447	55.960	26.692	55.843	26.936	55.725	27.179	62
63	56.981	26.874	56.863	27.122	56.744	27.370	56.624	27.617	63
64	57.885	27.300	57.765	27.553	57.645	27.804	57.523	28.056	64
65	58.790	27.727	58.668	27.983	58.545	28.239	58.422	28.494	65
66	59.694	28.154	59.571	28.414	59.446	28.673	59.320	28.932	66
67	60.598	28.580	60.473	28.844	60.347	29.108	60.219	29.371	67
68	61.503	29.007	61.376	29.275	61.247	29.542	61.118	29.809	68
69	62.407	29.433	62.278	29.705	62.148	29.977	62.017	30.248	69
70	63.312	29.860	63.181	30.136	63.049	30.411	62.916	30.686	70
71	64.216	30.286	64.084	30.566	63.950	30.846	63.814	31.124	71
72	65.121	30.713	64.986	30.997	64.850	31.280	64.713	31.563	72
73	66.025	31.140	65.889	31.427	65.751	31.714	65.612	32.001	73
74	66.930	31.566	66.791	31.858	66.652	32.149	66.511	32.439	74
75	67.834	31.993	67.694	32.288	67.552	32.583	67.410	32.878	75
76	68.739	32.419	68.596	32.719	68.453	33.018	68.308	33.316	76
77	69.643	32.846	69.499	33.149	69.354	33.452	69.207	33.755	77
78	70.547	33.272	70.402	33.580	70.254	33.887	70.106	34.193	78
79	71.452	33.699	71.304	34.010	71.155	34.321	71.005	34.631	79
80	72.356	34.126	72.207	34.441	72.056	34.756	71.904	35.070	80
81	73.261	34.552	73.109	34.871	72.957	35.190	72.802	35.508	81
82	74.165	34.979	74.012	35.302	73.857	35.624	73.701	35.946	82
83	75.070	35.405	74.915	35.732	74.758	36.059	74.600	36.385	83
84	75.974	35.832	75.817	36.163	75.659	36.493	75.499	36.823	84
85	76.879	36.258	76.720	36.593	76.559	36.928	76.397	37.262	85
86	77.783	36.685	77.622	37.024	77.460	37.362	77.296	37.700	86
87	78.688	37.112	78.525	37.454	78.361	37.797	78.195	38.138	87
88	79.592	37.538	79.427	37.885	79.261	38.231	79.094	38.577	88
89	80.496	37.965	80.330	38.315	80.162	38.666	79.993	39.015	89
90	81.401	38.391	81.233	38.746	81.063	39.100	80.891	39.453	90
91	82.305	38.818	82.135	39.177	81.964	39.534	81.790	39.892	91
92	83.210	39.244	83.038	39.607	82.864	39.969	82.689	40.330	92
93	84.114	39.671	83.940	40.038	83.765	40.403	83.588	40.769	93
94	85.019	40.097	84.843	40.468	84.666	40.838	84.487	41.207	94
95	85.923	40.524	85.746	40.899	85.566	41.272	85.385	41.645	95
96	86.828	40.951	86.648	41.329	86.467	41.707	86.284	42.084	96
97	87.732	41.377	87.551	41.760	87.368	42.141	87.183	42.522	97
98	88.637	41.804	88.453	42.190	88.268	42.576	88.082	42.960	98
99	89.541	42.230	89.356	42.621	89.169	43.010	88.981	43.399	99
100	90.445	42.657	90.258	43.051	90.070	43.444	89.879	43.837	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	64 Degrees.								

Dist.	26 Degrees.						27 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.897	0.442	0.895	0.446	0.893	0.450	0.891	0.454	1
2	1.794	0.885	1.790	0.892	1.786	0.900	1.782	0.908	2
3	2.691	1.327	2.685	1.339	2.679	1.350	2.673	1.362	3
4	3.587	1.769	3.580	1.785	3.572	1.800	3.564	1.816	4
5	4.484	2.211	4.475	2.231	4.465	2.250	4.455	2.270	5
6	5.381	2.654	5.370	2.677	5.358	2.701	5.346	2.724	6
7	6.278	3.096	6.265	3.123	6.251	3.151	6.237	3.178	7
8	7.175	3.538	7.159	3.570	7.144	3.601	7.128	3.632	8
9	8.072	3.981	8.054	4.016	8.037	4.051	8.019	4.086	9
10	8.969	4.423	8.949	4.462	8.930	4.501	8.910	4.540	10
11	9.866	4.865	9.844	4.908	9.823	4.951	9.801	4.994	11
12	10.762	5.307	10.739	5.354	10.716	5.401	10.692	5.448	12
13	11.659	5.750	11.634	5.801	11.609	5.851	11.583	5.902	13
14	12.556	6.192	12.529	6.247	12.502	6.301	12.474	6.356	14
15	13.453	6.634	13.424	6.693	13.395	6.751	13.365	6.810	15
16	14.350	7.077	14.319	7.139	14.288	7.202	14.256	7.264	16
17	15.247	7.519	15.214	7.585	15.181	7.652	15.147	7.718	17
18	16.144	7.961	16.109	8.032	16.074	8.102	16.038	8.172	18
19	17.041	8.403	17.004	8.478	16.967	8.552	16.929	8.626	19
20	17.937	8.846	17.899	8.924	17.860	9.002	17.820	9.080	20
21	18.834	9.288	18.794	9.370	18.753	9.452	18.711	9.534	21
22	19.731	9.730	19.689	9.816	19.646	9.902	19.602	9.988	22
23	20.628	10.173	20.583	10.263	20.539	10.352	20.493	10.442	23
24	21.525	10.615	21.478	10.709	21.431	10.802	21.384	10.896	24
25	22.422	11.057	22.373	11.155	22.324	11.252	22.275	11.350	25
26	23.319	11.500	23.268	11.601	23.217	11.703	23.166	11.804	26
27	24.216	11.942	24.163	12.047	24.110	12.153	24.057	12.258	27
28	25.112	12.384	25.058	12.494	25.003	12.603	24.948	12.712	28
29	26.009	12.826	25.953	12.940	25.896	13.053	25.839	13.166	29
30	26.906	13.269	26.848	13.386	26.789	13.503	26.730	13.620	30
31	27.803	13.711	27.743	13.832	27.682	13.953	27.621	14.074	31
32	28.700	14.153	28.638	14.278	28.575	14.403	28.512	14.528	32
33	29.597	14.596	29.533	14.725	29.468	14.853	29.403	14.982	33
34	30.494	15.038	30.428	15.171	30.361	15.303	30.294	15.436	34
35	31.391	15.480	31.323	15.617	31.254	15.753	31.185	15.890	35
36	32.287	15.922	32.218	16.063	32.147	16.204	32.076	16.344	36
37	33.184	16.365	33.113	16.509	33.040	16.654	32.967	16.798	37
38	34.081	16.807	34.007	16.956	33.933	17.104	33.858	17.252	38
39	34.978	17.249	34.902	17.402	34.826	17.554	34.749	17.706	39
40	35.875	17.692	35.797	17.848	35.719	18.004	35.640	18.160	40
41	36.772	18.134	36.692	18.294	36.612	18.454	36.531	18.614	41
42	37.669	18.576	37.587	18.740	37.505	18.904	37.422	19.068	42
43	38.566	19.018	38.482	19.187	38.398	19.354	38.313	19.522	43
44	39.462	19.461	39.377	19.633	39.291	19.804	39.204	19.976	44
45	40.359	19.903	40.272	20.079	40.184	20.254	40.095	20.430	45
46	41.256	20.345	41.167	20.525	41.077	20.705	40.986	20.884	46
47	42.153	20.788	42.062	20.971	41.970	21.155	41.877	21.338	47
48	43.050	21.230	42.957	21.418	42.863	21.605	42.768	21.792	48
49	43.947	21.672	43.852	21.864	43.756	22.055	43.659	22.246	49
50	44.844	22.114	44.747	22.310	44.649	22.505	44.550	22.699	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	63 Degrees.								

Dist.	26 Degrees.						27 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	45.741	22.557	45.642	22.756	45.542	22.955	45.441	23.153	51
52	46.637	22.999	46.537	23.202	46.435	23.405	46.332	23.607	52
53	47.534	23.441	47.432	23.648	47.328	23.855	47.223	24.061	53
54	48.431	23.884	48.326	24.095	48.221	24.305	48.114	24.515	54
55	49.328	24.326	49.221	24.541	49.114	24.755	49.005	24.969	55
56	50.225	24.768	50.116	24.987	50.007	25.206	49.896	25.423	56
57	51.122	25.210	51.011	25.433	50.900	25.656	50.787	25.877	57
58	52.019	25.653	51.906	25.879	51.793	26.106	51.678	26.331	58
59	52.916	26.095	52.801	26.326	52.686	26.556	52.569	26.785	59
60	53.812	26.537	53.696	26.772	53.579	27.006	53.460	27.239	60
61	54.709	26.980	54.591	27.218	54.472	27.456	54.351	27.693	61
62	55.606	27.422	55.486	27.664	55.365	27.906	55.242	28.147	62
63	56.503	27.864	56.381	28.110	56.258	28.356	56.133	28.601	63
64	57.400	28.306	57.276	28.557	57.151	28.806	57.024	29.055	64
65	58.297	28.749	58.171	29.003	58.044	29.256	57.915	29.509	65
66	59.194	29.191	59.066	29.449	58.937	29.707	58.806	29.963	66
67	60.090	29.633	59.961	29.895	59.830	30.157	59.697	30.417	67
68	60.987	30.076	60.856	30.341	60.723	30.607	60.588	30.871	68
69	61.884	30.518	61.750	30.788	61.616	31.057	61.479	31.325	69
70	62.781	30.960	62.645	31.234	62.509	31.507	62.370	31.779	70
71	63.678	31.403	63.540	31.680	63.402	31.957	63.261	32.233	71
72	64.575	31.845	64.435	32.126	64.294	32.407	64.152	32.687	72
73	65.472	32.287	65.330	32.572	65.187	32.857	65.043	33.141	73
74	66.369	32.729	66.225	33.019	66.080	33.307	65.934	33.595	74
75	67.265	33.172	67.120	33.465	66.973	33.757	66.825	34.049	75
76	68.162	33.614	68.015	33.911	67.866	34.208	67.716	34.503	76
77	69.059	34.056	68.910	34.357	68.759	34.658	68.607	34.957	77
78	69.956	34.499	69.805	34.803	69.652	35.108	69.498	35.411	78
79	70.853	34.941	70.700	35.250	70.545	35.558	70.389	35.865	79
80	71.750	35.383	71.595	35.696	71.438	36.008	71.280	36.319	80
81	72.647	35.825	72.490	36.142	72.331	36.458	72.171	36.773	81
82	73.544	36.268	73.385	36.588	73.224	36.908	73.062	37.227	82
83	74.440	36.710	74.280	37.034	74.117	37.358	73.953	37.681	83
84	75.337	37.152	75.174	37.481	75.010	37.808	74.845	38.135	84
85	76.234	37.595	76.069	37.927	75.903	38.258	75.736	38.589	85
86	77.131	38.037	76.964	38.373	76.796	38.709	76.627	39.043	86
87	78.028	38.479	77.859	38.819	77.689	39.159	77.518	39.497	87
88	78.925	38.921	78.754	39.265	78.582	39.609	78.409	39.951	88
89	79.822	39.364	79.649	39.712	79.475	40.059	79.300	40.405	89
90	80.719	39.806	80.544	40.158	80.368	40.509	80.191	40.859	90
91	81.615	40.248	81.439	40.604	81.261	40.959	81.082	41.313	91
92	82.512	40.691	82.334	41.050	82.154	41.409	81.973	41.767	92
93	83.409	41.133	83.229	41.496	83.047	41.859	82.864	42.221	93
94	84.306	41.575	84.124	41.943	83.940	42.309	83.755	42.675	94
95	85.203	42.017	85.019	42.389	84.833	42.759	84.646	43.129	95
96	86.100	42.460	85.914	42.835	85.726	43.210	85.537	43.583	96
97	86.997	42.902	86.809	43.281	86.619	43.660	86.428	44.037	97
98	87.894	43.344	87.704	43.727	87.512	44.110	87.319	44.491	98
99	88.790	43.787	88.598	44.174	88.405	44.560	88.210	44.945	99
100	89.687	44.229	89.493	44.620	89.298	45.010	89.101	45.399	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	63 Degrees.								

Dist.	27 Degrees.						28 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S	E. W.	
1	0.889	0.458	0.887	0.462	0.885	0.460	0.883	0.469	1
2	1.778	0.916	1.774	0.923	1.770	0.931	1.766	0.939	2
3	2.667	1.374	2.661	1.385	2.655	1.397	2.649	1.408	3
4	3.556	1.831	3.548	1.847	3.540	1.862	3.532	1.878	4
5	4.445	2.289	4.435	2.309	4.425	2.328	4.415	2.347	5
6	5.334	2.747	5.322	2.770	5.310	2.794	5.298	2.817	6
7	6.223	3.205	6.209	3.232	6.195	3.259	6.181	3.286	7
8	7.112	3.663	7.096	3.694	7.080	3.725	7.064	3.756	8
9	8.001	4.121	7.983	4.156	7.965	4.191	7.947	4.225	9
10	8.890	4.579	8.870	4.617	8.850	4.656	8.829	4.695	10
11	9.779	5.037	9.757	5.079	9.735	5.122	9.712	5.164	11
12	10.668	5.494	10.644	5.541	10.620	5.587	10.595	5.634	12
13	11.557	5.952	11.531	6.003	11.505	6.053	11.478	6.103	13
14	12.446	6.410	12.418	6.464	12.390	6.519	12.361	6.573	14
15	13.335	6.868	13.305	6.926	13.275	6.984	13.244	7.042	15
16	14.224	7.326	14.192	7.388	14.160	7.450	14.127	7.512	16
17	15.113	7.784	15.079	7.850	15.045	7.915	15.010	7.981	17
18	16.002	8.242	15.966	8.311	15.930	8.381	15.893	8.450	18
19	16.891	8.700	16.853	8.773	16.815	8.847	16.776	8.920	19
20	17.780	9.157	17.740	9.235	17.700	9.312	17.659	9.389	20
21	18.669	9.615	18.627	9.697	18.585	9.778	18.542	9.859	21
22	19.558	10.073	19.514	10.158	19.470	10.244	19.425	10.328	22
23	20.447	10.531	20.401	10.620	20.355	10.709	20.308	10.798	23
24	21.336	10.989	21.288	11.082	21.240	11.175	21.191	11.267	24
25	22.225	11.447	22.175	11.544	22.125	11.640	22.074	11.737	25
26	23.114	11.905	23.062	12.005	23.010	12.106	22.957	12.206	26
27	24.003	12.363	23.949	12.467	23.895	12.572	23.840	12.676	27
28	24.892	12.820	24.836	12.929	24.780	13.037	24.723	13.145	28
29	25.781	13.278	25.723	13.391	25.665	13.503	25.605	13.615	29
30	26.671	13.736	26.610	13.852	26.550	13.969	26.488	14.084	30
31	27.560	14.194	27.497	14.314	27.435	14.434	27.371	14.554	31
32	28.449	14.652	28.384	14.776	28.320	14.900	28.254	15.023	32
33	29.338	15.110	29.271	15.238	29.205	15.365	29.137	15.493	33
34	30.227	15.568	30.158	15.699	30.090	15.831	30.020	15.962	34
35	31.116	16.026	31.045	16.161	30.975	16.296	30.903	16.431	35
36	32.005	16.483	31.932	16.623	31.860	16.762	31.786	16.901	36
37	32.894	16.941	32.819	17.085	32.745	17.228	32.669	17.370	37
38	33.783	17.399	33.706	17.546	33.630	17.693	33.552	17.840	38
39	34.672	17.857	34.593	18.008	34.515	18.159	34.435	18.309	39
40	35.561	18.315	35.480	18.470	35.400	18.625	35.318	18.779	40
41	36.450	18.773	36.367	18.932	36.285	19.090	36.201	19.240	41
42	37.339	19.231	37.254	19.393	37.169	19.556	37.084	19.718	42
43	38.228	19.689	38.141	19.855	38.054	20.021	37.967	20.187	43
44	39.117	20.146	39.028	20.317	38.939	20.487	38.850	20.657	44
45	40.006	20.604	39.915	20.779	39.824	20.953	39.733	21.126	45
46	40.895	21.062	40.803	21.240	40.709	21.418	40.616	21.596	46
47	41.784	21.520	41.690	21.702	41.594	21.884	41.499	22.065	47
48	42.673	21.978	42.577	22.164	42.479	22.349	42.382	22.535	48
49	43.562	22.436	43.464	22.626	43.364	22.815	43.264	23.004	49
50	44.451	22.894	44.351	23.087	44.249	23.281	44.14	23.474	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	62 Degrees.								

Dist.	27 Degrees						28 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S	E. W.	N. S.	E. W.	N. S	E. W.	N. S.	E. W.	
51	45.34	23.352	45.238	23.549	45.134	23.746	45.030	23.943	51
52	46.229	23.809	46.125	24.011	46.019	24.212	45.913	24.412	52
53	47.118	24.267	47.012	24.473	46.904	24.678	46.796	24.882	53
54	48.007	24.725	47.899	24.934	47.789	25.143	47.679	25.351	54
55	48.896	25.183	48.786	25.396	48.674	25.609	48.562	25.821	55
56	49.785	25.641	49.673	25.858	49.559	26.074	49.445	26.290	56
57	50.674	26.099	50.560	26.320	50.444	26.540	50.328	26.760	57
58	51.563	26.557	51.447	26.781	51.329	27.006	51.211	27.229	58
59	52.452	27.015	52.334	27.243	52.214	27.471	52.094	27.699	59
60	53.341	27.472	53.221	27.705	53.099	27.937	52.977	28.168	60
61	54.230	27.930	54.108	28.167	53.984	28.402	53.800	28.638	61
62	55.119	28.388	54.995	28.628	54.869	28.868	54.743	29.107	62
63	56.008	28.846	55.882	29.090	55.754	29.334	55.626	29.577	63
64	56.897	29.304	56.769	29.552	56.639	29.799	56.509	30.046	64
65	57.786	29.762	57.656	30.014	57.524	30.265	57.392	30.516	65
66	58.675	30.220	58.543	30.475	58.409	30.731	58.275	30.985	66
67	59.564	30.678	59.430	30.937	59.294	31.196	59.158	31.455	67
68	60.453	31.135	60.317	31.399	60.179	31.662	60.040	31.924	68
69	61.342	31.593	61.204	31.861	61.064	32.127	60.923	32.393	69
70	62.231	32.051	62.091	32.322	61.949	32.593	61.806	32.863	70
71	63.120	32.509	62.978	32.784	62.834	33.059	62.689	33.332	71
72	64.009	32.967	63.865	33.246	63.719	33.524	63.572	33.802	72
73	64.898	33.425	64.752	33.708	64.604	33.990	64.455	34.271	73
74	65.787	33.883	65.639	34.169	65.489	34.455	65.338	34.741	74
75	66.676	34.341	66.526	34.631	66.374	34.921	66.221	35.210	75
76	67.565	34.798	67.413	35.093	67.259	35.387	67.104	35.680	76
77	68.454	35.256	68.300	35.555	68.144	35.852	67.987	36.149	77
78	69.343	35.714	69.187	36.016	69.029	36.318	68.870	36.619	78
79	70.232	36.172	70.074	36.478	69.914	36.784	69.753	37.088	79
80	71.121	36.630	70.961	36.940	70.799	37.249	70.636	37.558	80
81	72.010	37.088	71.848	37.402	71.684	37.715	71.519	38.027	81
82	72.899	37.546	72.735	37.863	72.569	38.180	72.402	38.497	82
83	73.788	38.004	73.622	38.325	73.454	38.646	73.285	38.966	83
84	74.677	38.461	74.509	38.787	74.339	39.112	74.168	39.436	84
85	75.566	38.919	75.396	39.249	75.224	39.577	75.051	39.905	85
86	76.455	39.377	76.283	39.710	76.109	40.043	75.934	40.375	86
87	77.344	39.835	77.170	40.172	76.994	40.508	76.816	40.844	87
88	78.233	40.293	78.057	40.634	77.879	40.974	77.699	41.313	88
89	79.123	40.751	78.944	41.096	78.764	41.440	78.582	41.783	89
90	80.012	41.209	79.831	41.557	79.649	41.905	79.465	42.252	90
91	80.901	41.667	80.718	42.019	80.534	42.371	80.348	42.722	91
92	81.790	42.124	81.605	42.481	81.419	42.836	81.231	43.191	92
93	82.679	42.582	82.492	42.943	82.304	43.302	82.114	43.661	93
94	83.568	43.040	83.379	43.404	83.189	43.768	82.997	44.130	94
95	84.457	43.498	84.266	43.866	84.074	44.233	83.880	44.600	95
96	85.346	43.956	85.153	44.328	84.959	44.699	84.763	45.069	96
97	86.235	44.414	86.040	44.790	85.844	45.165	85.646	45.539	97
98	87.124	44.872	86.927	45.251	86.729	45.630	86.529	46.008	98
99	88.013	45.330	87.814	45.713	87.614	46.096	87.412	46.478	99
100	88.907	45.787	88.701	46.175	88.499	46.561	88.295	46.947	100
Dist.	E. W	N. S	E. W.	N. S	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	62 Degrees.								

Dist.	28 Degrees.						29 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.881	0.473	0.879	0.477	0.877	0.481	0.875	0.485	1
2	1.762	0.947	1.758	0.954	1.753	0.962	1.749	0.970	2
3	2.643	1.420	2.636	1.431	2.630	1.443	2.624	1.454	3
4	3.524	1.893	3.515	1.909	3.507	1.924	3.498	1.939	4
5	4.404	2.367	4.394	2.386	4.384	2.405	4.373	2.424	5
6	5.285	2.840	5.273	2.863	5.260	2.886	5.248	2.909	6
7	6.166	3.313	6.152	3.340	6.137	3.367	6.122	3.394	7
8	7.047	3.787	7.031	3.817	7.014	3.848	6.997	3.878	8
9	7.928	4.250	7.909	4.294	7.891	4.329	7.872	4.363	9
10	8.809	4.733	8.788	4.772	8.767	4.810	8.746	4.848	10
11	9.690	5.207	9.667	5.249	9.644	5.291	9.621	5.333	11
12	10.571	5.680	10.546	5.726	10.521	5.772	10.495	5.818	12
13	11.452	6.153	11.425	6.203	11.397	6.253	11.370	6.303	13
14	12.332	6.626	12.303	6.680	12.274	6.734	12.245	6.787	14
15	13.213	7.100	13.182	7.157	13.151	7.215	13.119	7.272	15
16	14.094	7.573	14.061	7.635	14.028	7.696	13.994	7.757	16
17	14.975	8.046	14.940	8.112	14.904	8.177	14.869	8.242	17
18	15.856	8.520	15.819	8.589	15.781	8.658	15.743	8.727	18
19	16.737	8.993	16.698	9.066	16.658	9.139	16.618	9.211	19
20	17.618	9.466	17.576	9.543	17.535	9.620	17.492	9.696	20
21	18.499	9.940	18.455	10.020	18.411	10.101	18.367	10.181	21
22	19.380	10.413	19.334	10.497	19.288	10.582	19.242	10.666	22
23	20.260	10.886	20.213	10.975	20.165	11.063	20.116	11.151	23
24	21.141	11.360	21.092	11.452	21.041	11.544	20.991	11.635	24
25	22.022	11.833	21.970	11.929	21.918	12.025	21.855	12.120	25
26	22.903	12.306	22.849	12.406	22.795	12.506	22.740	12.605	26
27	23.784	12.780	23.728	12.883	23.672	12.987	23.615	13.090	27
28	24.665	13.253	24.607	13.360	24.548	13.460	24.489	13.575	28
29	25.546	13.726	25.486	13.838	25.425	13.949	25.364	14.059	29
30	26.427	14.200	26.365	14.315	26.302	14.430	26.239	14.544	30
31	27.308	14.673	27.243	14.792	27.179	14.911	27.113	15.029	31
32	28.189	15.146	28.122	15.269	28.055	15.392	27.988	15.514	32
33	29.069	15.620	29.001	15.746	28.932	15.873	28.862	15.999	33
34	29.950	16.093	29.880	16.223	29.809	16.354	29.737	16.484	34
35	30.831	16.566	30.759	16.701	30.685	16.835	30.612	16.968	35
36	31.712	17.040	31.637	17.178	31.562	17.316	31.486	17.453	36
37	32.593	17.513	32.516	17.655	32.439	17.797	32.361	17.938	37
38	33.474	17.986	33.395	18.132	33.316	18.278	33.236	18.423	38
39	34.355	18.459	34.274	18.609	34.192	18.759	34.110	18.908	39
40	35.236	18.933	35.153	19.086	35.069	19.240	34.985	19.392	40
41	36.117	19.406	36.031	19.564	35.946	19.721	35.859	19.877	41
42	36.997	19.879	36.910	20.041	36.823	20.202	36.734	20.362	42
43	37.878	20.353	37.789	20.518	37.699	20.683	37.609	20.847	43
44	38.759	20.826	38.668	20.995	38.576	21.164	38.483	21.332	44
45	39.640	21.299	39.547	21.472	39.453	21.645	39.358	21.816	45
46	40.521	21.773	40.426	21.949	40.329	22.125	40.233	22.301	46
47	41.402	22.246	41.304	22.426	41.206	22.606	41.107	22.786	47
48	42.283	22.719	42.183	22.904	42.083	23.087	41.982	23.271	48
49	43.164	23.193	43.062	23.381	42.960	23.568	42.857	23.756	49
50	44.045	23.666	43.941	23.858	43.836	24.049	43.731	24.240	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	61 Degrees.								

Dist.	28 Degrees.						29 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	44.925	24.139	44.820	24.335	44.713	24.530	44.606	24.725	51
52	45.806	24.613	45.698	24.812	45.590	25.011	45.480	25.210	52
53	46.687	25.086	46.577	25.289	46.467	25.492	46.355	25.695	53
54	47.568	25.559	47.456	25.767	47.343	25.973	47.229	26.180	54
55	48.449	26.033	48.335	26.244	48.220	26.454	48.104	26.665	55
56	49.330	26.506	49.214	26.721	49,097	26.935	48.979	27.149	56
57	50.211	26.979	50.093	27.198	49.973	27.416	49.853	27.634	57
58	51.092	27.453	50.971	27.675	50.850	27.897	50.728	28.119	58
59	51.973	27.926	51.850	28.152	51.727	28.378	51.603	28.604	59
60	52.853	28.399	52.729	28.630	52.604	28.859	52.477	29.089	60
61	53.734	28.873	53.608	29.107	53.480	29.340	53.352	29.573	61
62	54.615	29.346	54.487	29.584	54.357	29.821	54.226	30.058	62
63	55.496	29.819	55.365	30.061	55.234	30.302	55.101	30.543	63
64	56.377	30.292	56.244	30.538	56.111	30.783	55.976	31.028	64
65	57.258	30.766	57.123	31.015	56.987	31.264	56.850	31.513	65
66	58.139	31.239	58.002	31.492	57.864	31.745	57.725	31.997	66
67	59.020	31.712	58.881	31.970	58.741	32.226	58.600	32.482	67
68	59.901	32.186	59.760	32.447	59.617	32.707	59.474	32.967	68
69	60.781	32.659	60.638	32.924	60.494	33.188	60.349	33.452	69
70	61.662	33.132	61.517	33.401	61.371	33.669	61.223	33.937	70
71	62.543	33.606	62.396	33.878	62.248	34.150	62.098	34.422	71
72	63.424	34.079	63.275	34.355	63.124	34.631	62.973	34.906	72
73	64.305	34.552	64.154	34.833	64.001	35.112	63.847	35.391	73
74	65.186	35.026	65.032	35.309	64.878	35.593	64.722	35.876	74
75	66.067	35.499	65.911	35.787	65.755	36.074	65.596	36.361	75
76	66.948	35.972	66.790	36.264	66.631	36.555	66.471	36.846	76
77	67.829	36.446	67.669	36.741	67.508	37.036	67.346	37.330	77
78	68.709	36.919	68.548	37.218	68.385	37.517	68.220	37.815	78
79	69.590	37.392	69.427	37.696	69.261	37.998	69.095	38.300	79
80	70.471	37.866	70.305	38.173	70.138	38.479	69.970	38.785	80
81	71.352	38.339	71.184	38.650	71.015	38.960	70.844	39.270	81
82	72.233	38.812	72.063	39.127	71.892	39.441	71.719	39.754	82
83	73.114	39.286	72.942	39.604	72.768	39.922	72.593	40.239	83
84	73.995	39.759	73.821	40.081	73.645	40.403	73.468	40.724	84
85	74.876	40.232	74.699	40.559	74.522	40.884	74.343	41.209	85
86	75.757	40.706	75.578	41.036	75.399	41.365	75.217	41.694	86
87	76.638	41.179	76.457	41.513	76.275	41.846	76.092	42.178	87
88	77.518	41.652	77.336	41.990	77.152	42.327	76.967	42.663	88
89	78.399	42.125	78.215	42.467	78.029	42.808	77.841	43.148	89
90	79.280	42.599	79.094	42.944	78.905	43.289	78.716	43.633	90
91	80.161	43.072	79.972	43.421	79.782	43.770	79.590	44.118	91
92	81.042	43.545	80.851	43.899	80.659	44.251	80.465	44.603	92
93	81.923	44.019	81.730	44.376	81.536	44.732	81.340	45.087	93
94	82.804	44.492	82.609	44.853	82.412	45.213	82.214	45.572	94
95	83.685	44.965	83.488	45.330	83.289	45.694	83.089	46.057	95
96	84.566	45.439	84.366	45.807	84.166	46.175	83.964	46.542	96
97	85.446	45.912	85.245	46.284	85.043	46.656	84.838	47.027	97
98	86.327	46.385	86.124	46.762	85.919	47.137	85.713	47.511	98
99	87.208	46.859	87.003	47.239	86.796	47.618	86.587	47.996	99
100	88.089	47.332	87.882	47.716	87.673	48.099	87.462	48.481	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	61 Degrees.								

Dift.	29 Degrees.						30 Degrees.		Dift.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.872	0.489	0.870	0.492	0.868	0.496	0.866	0.500	1
2	1.745	0.977	1.741	0.985	1.736	0.992	1.732	1.000	2
3	2.617	1.466	2.611	1.477	2.605	1.489	2.598	1.500	3
4	3.490	1.954	3.481	1.970	3.473	1.985	3.464	2.000	4
5	4.362	2.443	4.352	2.462	4.341	2.481	4.330	2.500	5
6	5.235	2.932	5.222	2.955	5.209	2.977	5.196	3.000	6
7	6.107	3.420	6.092	3.447	6.077	3.474	6.062	3.500	7
8	6.980	3.909	6.963	3.939	6.946	3.970	6.928	4.000	8
9	7.852	4.398	7.833	4.432	7.814	4.466	7.794	4.500	9
10	8.725	4.886	8.704	4.924	8.682	4.962	8.660	5.000	10
11	9.597	5.375	9.574	5.417	9.550	5.458	9.526	5.500	11
12	10.470	5.863	10.444	5.909	10.418	5.955	10.392	6.000	12
13	11.342	6.352	11.315	6.402	11.287	6.451	11.258	6.500	13
14	12.215	6.841	12.185	6.894	12.155	6.947	12.124	7.000	14
15	13.087	7.329	13.055	7.386	13.023	7.443	12.990	7.500	15
16	13.960	7.818	13.926	7.879	13.891	7.939	13.856	8.000	16
17	14.832	8.307	14.796	8.371	14.759	8.436	14.722	8.500	17
18	15.705	8.795	15.666	8.864	15.628	8.932	15.588	9.000	18
19	16.577	9.284	16.537	9.350	16.496	9.428	16.454	9.500	19
20	17.450	9.772	17.407	9.848	17.364	9.924	17.320	10.000	20
21	18.322	10.261	18.277	10.341	18.232	10.421	18.187	10.500	21
22	19.195	10.750	19.148	10.833	19.100	10.917	19.053	11.000	22
23	20.067	11.238	20.018	11.320	19.969	11.413	19.919	11.500	23
24	20.940	11.727	20.889	11.818	20.837	11.909	20.785	12.000	24
25	21.812	12.216	21.759	12.311	21.705	12.405	21.651	12.500	25
26	22.685	12.704	22.629	12.803	22.573	12.902	22.517	13.000	26
27	23.557	13.193	23.500	13.295	23.441	13.398	23.383	13.500	27
28	24.430	13.681	24.370	13.782	24.310	13.894	24.249	14.000	28
29	25.302	14.170	25.240	14.280	25.178	14.390	25.115	14.500	29
30	26.175	14.659	26.111	14.773	26.046	14.886	25.981	15.000	30
31	27.047	15.147	26.981	15.205	26.914	15.383	20.847	15.500	31
32	27.920	15.636	27.851	15.758	27.782	15.879	27.713	16.000	32
33	28.792	16.124	28.722	16.250	28.651	16.375	28.579	16.500	33
34	29.665	16.613	29.592	16.743	29.519	16.871	29.445	17.000	34
35	30.537	17.102	30.462	17.235	30.387	17.368	30.311	17.500	35
36	31.410	17.590	31.333	17.727	31.255	17.864	31.177	18.000	36
37	32.282	18.079	32.203	18.220	32.123	18.360	32.043	18.500	37
38	33.155	18.568	33.074	18.712	32.992	18.856	32.909	19.000	38
39	34.027	19.056	33.944	19.205	33.860	19.352	33.775	19.500	39
40	34.900	19.545	34.814	19.697	34.728	19.849	34.641	20.000	40
41	35.772	20.033	35.685	20.189	35.596	20.345	35.507	20.500	41
42	36.645	20.522	36.555	20.682	36.464	20.841	36.373	21.000	42
43	37.517	21.011	37.425	21.174	37.333	21.337	37.239	21.500	43
44	38.390	21.499	38.296	21.667	38.201	21.834	38.105	22.000	44
45	39.262	21.988	39.166	22.159	39.069	22.330	38.971	22.500	45
46	40.135	22.476	40.036	22.652	39.937	22.826	39.837	23.000	46
47	41.007	22.965	40.907	23.144	40.805	23.322	40.703	23.500	47
48	41.880	23.454	41.777	23.636	41.674	23.818	41.569	24.000	48
49	42.752	23.942	42.647	24.129	42.542	24.315	42.435	24.500	49
50	43.625	24.431	43.518	24.621	43.410	24.811	43.301	25.000	50
Dift.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dift.
	45 Min.		30 Min.		5 Min.		0 Min.		
	60 Degrees.								

Dist.	29 Degrees.						30 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		o Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	44.497	24.920	44.388	25.114	44.278	25.307	44.167	25.500	51
52	45.370	25.408	45.259	25.606	45.146	25.803	45.033	26.000	52
53	46.242	25.897	46.129	26.098	46.015	26.299	45.899	26.500	53
54	47.115	26.386	46.999	26.591	46.883	26.796	46.765	27.000	54
55	47.987	26.874	47.870	27.083	47.751	27.292	47.631	27.500	55
56	48.860	27.363	48.740	27.576	48.619	27.788	48.497	28.000	56
67	49.732	2 .851	49.610	28.068	49.487	28.284	49.363	28.500	57
58	50.605	28.340	50.481	28.561	50.356	28.781	50.229	29.000	58
59	51.477	28.829	51.351	29.053	51.224	29.277	51.095	29.500	59
60	52.350	29.317	52.221	29.545	52.092	29.773	51.961	30.000	60
61	53.222	29.806	53.092	30.038	52.960	30.269	52.828	30.500	61
62	54.095	30.295	53.962	30.530	53.828	30.765	53.694	31.000	62
63	54.967	30.783	54.832	31.023	54.697	31.262	54.560	31.500	63
64	55.840	31.272	55.703	31.515	55.565	31.758	55.426	32.000	64
65	56.712	31.760	56.573	32.008	56.433	32.254	56.292	32.500	65
66	57.585	32.249	57.443	32.500	57.301	32.750	57.158	33.000	66
67	58.457	32.738	58.314	32.992	58.169	33.246	58.024	33.500	67
68	59.330	33.226	59.184	33.485	59.038	33.743	58.890	34.000	68
69	60.202	33.715	60.055	33.977	59.906	34.239	59.756	34.500	69
70	61.075	34.203	60.925	34.470	60.774	34.735	60.622	35.000	70
71	61.947	34.692	61.795	34.962	61.642	35.231	61.488	35.500	71
72	62.820	35.181	62.666	35.455	62.510	35.728	62.354	36.000	72
73	63.692	35.669	63.536	35.947	63.379	36.224	63.220	36.500	73
74	64.565	36.158	64.406	36.439	64.247	36.720	64.086	37.000	74
75	65.437	36.647	65.277	36.932	65.115	37.216	64.952	37.500	75
76	66.310	37.135	66.147	37.424	65.983	37.712	65.818	38.000	76
77	67.182	37.624	67.017	37.917	66.851	38.209	66.684	38.500	77
78	68.055	38.112	67.888	38.409	67.720	38.705	67.550	39.000	78
79	68.927	38.601	68.758	38.901	68.588	39.201	68.416	39.500	79
80	69.800	39.090	69.628	39.394	69.456	39.697	69.282	40.000	80
81	70.672	39.578	70.499	39.886	70.324	40.193	70.148	40.500	81
82	71.545	40.067	71.369	40.379	71.192	40.690	71.014	41.000	82
83	72.417	40.556	72.240	40.871	72.061	41.186	71.880	41.500	83
84	73.290	41.044	73.110	41.364	72.929	41.682	72.746	42.000	84
85	74.162	41.533	73.980	41.856	73.797	42.178	73.612	42.500	85
86	75.035	42.021	74.851	42.348	74.665	42.675	74.478	43.000	86
87	75.907	42.510	75.721	42.841	75.533	43.171	75.344	43.500	87
88	76.780	42.999	76.591	43.333	76.402	43.667	76.210	44.000	88
89	77.652	43.487	77.462	43.826	77.270	44.163	77.076	44.500	89
90	78.525	43.976	78.332	44.318	78.138	44.659	77.942	45.000	90
91	79.397	44.465	79.202	44.811	79.006	45.156	78.808	45.500	91
92	80.270	44.953	80.073	45.303	79.874	45.652	79.674	46.000	92
93	81.142	45.442	80.943	45.795	80.743	46.148	80.540	46.500	93
94	82,015	45.930	81.813	46.288	81.611	46.644	81.406	47.000	94
95	82.887	46.419	82.684	46.780	82.479	47.141	82.272	47.500	95
96	83.760	46.908	83.554	47.273	83.347	47.637	83.138	48.000	96
97	84.632	47.396	84.425	47.765	84.215	48.133	84.004	48.500	97
98	85.505	47.885	85.295	48.258	85.084	48.629	84.870	49.000	98
99	86.377	48.373	86.165	48.750	85.952	49.125	85.736	49.500	99
100	87.250	48.862	87.036	49.242	86.820	49.622	86.602	50.000	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		o Min.		
	60 Degrees.								

Diſt.	30 Degrees.						31 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.864	0.504	0.862	0.508	0.859	0.511	0.857	0.515	1
2	1.728	1.008	1.723	1.015	1.719	1.023	1.714	1.030	2
3	2.592	1.511	2.585	1.523	2.578	1.534	2.572	1.545	3
4	3.455	2.015	3.447	2.030	3.438	2.045	3.429	2.060	4
5	4.319	2.519	4.308	2.538	4.297	2.556	4.286	2.575	5
6	5.183	3.023	5.170	3.045	5.156	3.068	5.143	3.090	6
7	6.047	3.526	6.031	3.553	6.016	3.579	6.000	3.605	7
8	6.911	4.030	6.893	4.060	6.875	4.090	6.857	4.120	8
9	7.775	4.534	7.755	4.568	7.735	4.602	7.714	4.635	9
10	8.638	5.038	8.616	5.075	8.594	5.113	8.572	5.150	10
11	9.502	5.542	9.478	5.583	9.453	5.624	9.429	5.665	11
12	10.366	6.045	10.340	6.090	10.313	6.136	10.286	6.180	12
13	11.230	6.549	11.201	6.598	11.172	6.647	11.143	6.695	13
14	12.094	7.053	12.063	7.106	12.032	7.158	12.000	7.211	14
15	12.958	7.557	12.924	7.613	12.891	7.669	12.858	7.726	15
16	13.821	8.060	13.786	8.121	13.750	8.181	13.715	8.241	16
17	14.685	8.564	14.648	8.628	14.610	8.692	14.572	8.756	17
18	15.549	9.068	15.509	9.136	15.469	9.203	15.429	9.271	18
19	16.413	9.572	16.371	9.643	16.329	9.715	16.286	9.786	19
20	17.277	10.075	17.233	10.151	17.188	10.226	17.143	10.301	20
21	18.141	10.579	18.094	10.658	18.048	10.737	18.001	10.816	21
22	19.004	11.083	18.956	11.166	18.907	11.248	18.858	11.331	22
23	19.868	11.587	19.817	11.673	19.766	11.760	19.715	11.846	23
24	20.732	12.091	20.679	12.181	20.626	12.271	20.572	12.361	24
25	21.596	12.594	21.541	12.688	21.485	12.782	21.429	12.876	25
26	22.460	13.098	22.402	13.196	22.345	13.294	22.286	13.391	26
27	23.324	13.602	23.264	13.704	23.204	13.805	23.143	13.906	27
28	24.187	14.106	24.126	14.211	24.063	14.316	24.001	14.421	28
29	25.051	14.609	24.987	14.719	24.923	14.827	24.858	14.936	29
30	25.915	15.113	25.849	15.226	25.782	15.339	25.715	15.451	30
31	26.779	15.617	26.710	15.734	26.642	15.850	26.572	15.966	31
32	27.643	16.121	27.572	16.241	27.501	16.361	27.429	16.481	32
33	28.507	16.625	28.434	16.749	28.360	16.872	28.286	16.996	33
34	29.370	17.128	29.295	17.256	29.220	17.384	29.144	17.511	34
35	30.234	17.632	30.157	17.764	30.079	17.895	30.001	18.026	35
36	31.098	18.136	31.019	18.271	30.939	18.407	30.858	18.541	36
37	31.962	18.640	31.880	18.779	31.798	18.918	31.715	19.056	37
38	32.826	19.143	32.742	19.286	32.657	19.429	32.572	19.571	38
39	33.690	19.647	33.604	19.794	33.517	19.940	33.429	20.086	39
40	34.553	20.151	34.465	20.302	34.376	20.452	34.287	20.602	40
41	35.417	20.655	35.327	20.809	35.236	20.963	35.144	21.117	41
42	36.281	21.159	36.188	21.317	36.095	21.474	36.001	21.632	42
43	37.145	21.662	37.050	21.824	36.954	21.986	36.858	22.147	43
44	38.009	22.166	37.912	22.332	37.814	22.497	37.715	22.662	44
45	38.873	22.670	38.773	22.839	38.673	23.008	38.573	23.177	45
46	39.736	23.174	39.635	23.347	39.533	23.519	39.430	23.692	46
47	40.600	23.677	40.497	23.854	40.392	24.031	40.287	24.207	47
48	41.464	24.181	41.358	24.362	41.251	24.542	41.144	24.722	48
49	42.328	24.685	42.220	24.869	42.111	25.053	42.001	25.237	49
50	43.192	25.189	43.081	25.377	42.970	25.565	42.858	25.752	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	59 Degrees.								

Dist.	30 Degrees.						31 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	44.056	25.692	43.943	25.884	43.830	26.076	43.716	26.267	51
52	44.919	26.196	44.805	26.392	44.689	26.587	44.573	26.782	52
53	45.783	26.700	45.666	26.900	45.549	27.099	45.430	27.297	53
54	46.647	27.204	46.528	27.407	46.408	27.610	46.287	27.812	54
55	47.511	27.707	47.389	27.915	47.267	28.121	47.144	28.327	55
56	48.375	28.211	48.251	28.422	48.127	28.632	48.001	28.842	56
57	49.239	28.715	49.113	28.930	48.986	29.144	48.859	29.357	57
58	50.102	29.219	49.974	29.437	49.846	29.655	49.716	29.872	58
59	50.966	29.723	50.836	29.945	50.705	30.166	50.573	30.387	59
60	51.830	30.226	51.698	30.452	51.564	30.678	51.430	30.902	60
61	52.694	30.730	52.559	30.960	52.424	31.189	52.287	31.417	61
62	53.558	31.234	53.421	31.467	53.283	31.700	53.144	31.932	62
63	54.422	31.738	54.283	31.975	54.143	32.211	54.002	32.447	63
64	55.286	32.242	55.144	32.482	55.002	32.723	54.859	32.962	64
65	56.149	32.745	56.006	32.990	55.861	33.234	55.716	33.477	65
66	57.013	33.249	56.868	33.498	56.721	33.745	56.573	33.993	66
67	57.877	33.753	57.729	34.005	57.580	34.257	57.430	34.508	67
68	58.741	34.257	58.591	34.513	58.440	34.768	58.287	35.023	68
69	59.605	34.760	59.452	35.020	59.299	35.279	59.145	35.538	69
70	60.469	35.264	60.314	35.528	60.158	35.791	60.002	36.053	70
71	61.332	35.768	61.176	36.035	61.018	36.302	60.859	36.568	71
72	62.196	36.272	62.037	36.543	61.877	36.813	61.716	37.083	72
73	63.060	36.776	62.899	37.050	62.737	37.324	62.573	37.598	73
74	63.924	37.279	63.761	37.558	63.596	37.836	63.430	38.113	74
75	64.788	37.783	64.622	38.065	64.455	38.347	64.288	38.628	75
76	65.652	38.287	65.484	38.573	65.315	38.858	65.145	39.143	76
77	66.515	38.791	66.345	39.080	66.174	39.370	66.002	39.658	77
78	67.379	39.294	67.207	39.588	67.034	39.881	66.859	40.173	78
79	68.243	39.798	68.069	40.096	67.893	40.392	67.716	40.688	79
80	69.107	40.302	68.930	40.603	68.752	40.903	68.573	41.203	80
81	69.971	40.806	69.792	41.111	69.612	41.415	69.431	41.718	81
82	70.835	41.309	70.654	41.618	70.471	41.926	70.288	42.233	82
83	71.698	41.813	71.515	42.126	71.331	42.437	71.145	42.748	83
84	72.562	42.317	72.377	42.633	72.190	42.949	72.002	43.263	84
85	73.426	42.821	73.238	43.141	73.050	43.460	72.859	43.778	85
86	74.290	43.325	74.100	43.648	73.909	43.971	73.716	44.293	86
87	75.154	43.828	74.962	44.156	74.768	44.482	74.574	44.808	87
88	76.018	44.332	75.823	44.663	75.628	44.994	75.431	45.323	88
89	76.881	44.836	76.685	45.171	76.487	45.505	76.288	45.838	89
90	77.745	45.340	77.547	45.678	77.347	46.016	77.145	46.353	90
91	78.609	45.843	78.408	46.186	78.206	46.528	78.002	46.868	91
92	79.473	46.347	79.270	46.693	79.065	47.039	78.859	47.383	92
93	80.337	46.851	80.131	47.201	79.925	47.550	79.717	47.899	93
94	81.201	47.355	80.993	47.709	80.784	48.061	80.574	48.414	94
95	82.064	47.859	81.855	48.216	81.644	48.573	81.431	48.929	95
96	82.928	48.362	82.716	48.724	82.503	49.084	82.288	49.444	96
97	83.792	48.866	83.578	49.231	83.362	49.595	83.145	49.959	97
98	84.656	49.370	84.440	49 739	84.222	50.107	84.002	50.474	98
99	85.520	49.874	85.301	50.246	85.081	50.618	84.860	50.989	99
100	86.384	50.377	86.163	50.754	85.941	51.129	85.717	51.504	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	59 Degrees.								

Dist.	31 Degrees.						32 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.855	0.519	0.853	0.522	0.850	0.526	0.848	0.530	1
2	1.710	1.038	1.705	1.045	1.701	1.052	1.696	1.060	2
3	2.565	1.556	2.558	1.567	2.551	1.579	2.544	1.590	3
4	3.420	2.075	3.411	2.090	3.401	2.105	3.392	2.120	4
5	4.275	2.594	4.263	2.612	4.252	2.631	4.240	2.650	5
6	5.129	3.113	5.110	3.135	5.102	3.157	5.088	3.180	6
7	5.984	3.631	5.968	3.657	5.952	3.683	5.936	3.709	7
8	6.839	4.150	6.821	4.180	6.803	4.210	6.784	4.239	8
9	7.694	4.669	7.674	4.702	7.653	4.736	7.632	4.769	9
10	8.549	5.188	8.526	5.225	8.504	5.262	8.480	5.299	10
11	9.404	5.707	9.379	5.747	9.354	5.788	9.329	5.829	11
12	10.259	6.225	10.232	6.270	10.204	6.315	10.177	6.359	12
13	11.114	6.744	11.084	6.792	11.055	6.841	11.025	6.889	13
14	11.969	7.263	11.937	7.315	11.905	7.367	11.873	7.419	14
15	12.824	7.782	12.790	7.837	12.755	7.893	12.721	7.949	15
16	13.679	8.300	13.642	8.360	13.606	8.419	13.569	8.479	16
17	14.534	8.819	14.495	8.882	14.456	8.946	14.417	9.009	17
18	15.388	9.338	15.348	9.405	15.306	9.472	15.265	9.539	18
19	16.243	9.857	16.200	9.927	16.157	9.998	16.113	10.068	19
20	17.098	10.375	17.053	10.450	17.007	10.524	16.961	10.598	20
21	17.953	10.894	17.905	10.972	17.857	11.050	17.809	11.128	21
22	18.808	11.413	18.758	11.495	18.708	11.577	18.657	11.658	22
23	19.663	11.932	19.611	12.017	19.558	12.103	19.505	12.188	23
24	20.518	12.451	20.463	12.540	20.408	12.629	20.353	12.718	24
25	21.373	12.969	21.316	13.062	21.259	13.155	21.201	13.248	25
26	22.228	13.488	22.169	13.585	22.109	13.682	22.049	13.778	26
27	23.083	14.007	23.021	14.107	22.960	14.208	22.897	14.308	27
28	23.938	14.526	23.874	14.630	23.810	14.734	23.745	14.838	28
29	24.792	15.044	24.727	15.152	24.660	15.260	24.593	15.368	29
30	25.647	15.563	25.579	15.675	25.511	15.786	25.441	15.898	30
31	26.502	16.082	26.432	16.197	26.361	16.313	26.289	16.428	31
32	27.357	16.601	27.284	16.720	27.211	16.839	27.138	16.957	32
33	28.212	17.120	28.137	17.242	28.062	17.365	27.986	17.487	33
34	29.067	17.638	28.990	17.765	28.912	17.891	28.834	18.017	34
35	29.922	18.157	29.842	18.287	29.762	18.417	29.682	18.547	35
36	30.777	18.676	30.695	18.810	30.613	18.944	30.530	19.077	36
37	31.632	19.195	31.548	19.332	31.463	19.470	31.378	19.607	37
38	32.487	19.713	32.400	19.855	32.313	19.996	32.226	20.137	38
39	33.342	20.232	33.253	20.377	33.164	20.522	33.074	20.667	39
40	34.196	20.751	34.106	20.900	34.014	21.049	33.922	21.197	40
41	35.051	21.270	34.958	21.422	34.864	21.575	34.770	21.727	41
42	35.906	21.788	35.811	21.945	35.715	22.101	35.618	22.257	42
43	36.761	22.307	36.664	22.467	36.565	22.627	36.466	22.787	43
44	37.616	22.826	37.516	22.990	37.415	23.153	37.314	23.316	44
45	38.471	23.345	38.369	23.512	38.266	23.680	38.162	23.846	45
46	39.326	23.864	39.221	24.035	39.116	24.206	39.010	24.376	46
47	40.181	24.382	40.074	24.557	39.967	24.732	39.858	24.906	47
48	41.036	24.901	40.927	25.080	40.817	25.258	40.706	25.436	48
49	41.891	25.420	41.779	25.602	41.667	25.784	41.554	25.966	49
50	42.746	25.939	42.632	26.125	42.518	26.311	42.402	26.496	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	58 Degrees.								

Dist.	31 Degrees.						32 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	43.601	26.457	43.485	26.647	43.368	26.837	43.250	27.026	51
52	44.455	26.976	44.337	27.170	44.218	27.363	44.098	27.556	52
53	45.310	27.495	45.190	27.692	45.069	27.889	44.947	28.086	53
54	46.165	28.014	46.043	28.215	45.919	28.416	45.795	28.616	54
55	47.020	28.533	46.895	28.737	46.769	28.942	46.643	29.146	55
56	47.875	29.051	47.748	29.260	47.620	29.468	47.491	29.676	56
57	48.730	29.570	48.600	29.782	48.470	29.994	48.339	30.205	57
58	49.585	30.089	49.453	30.305	49.320	30.520	49.187	30.735	58
59	50.440	30.608	50.306	30.827	50.171	31.047	50.035	31.265	59
60	51.295	31.126	51.158	31.350	51.021	31.573	50.883	31.795	60
61	52.150	31.645	52.011	31.872	51.871	32.099	51.731	32.325	61
62	53.005	32.164	52.864	32.395	52.722	32.625	52.579	32.855	62
63	53.859	32.683	53.716	32.917	53.572	33.151	53.427	33.385	63
64	54.714	33.201	54.569	33.440	54.423	33.678	54.275	33.915	64
65	55.569	33.720	55.422	33.962	55.273	34.204	55.123	34.445	65
66	56.424	34.239	56.274	34.485	56.123	34.730	55.971	34.975	66
67	57.279	34.758	57.127	35.007	56.974	35.256	56.819	35.505	67
68	58.134	35.277	57.980	35.530	57.824	35.783	57.667	36.035	68
69	58.989	35.795	58.832	36.052	58.674	36.309	58.515	36.564	69
70	59.844	36.314	59.685	36.575	59.525	36.835	59.363	37.094	70
71	60.699	36.833	60.537	37.097	60.375	37.361	60.211	37.624	71
72	61.554	37.352	61.390	37.620	61.225	37.887	61.059	38.154	72
73	62.409	37.870	62.243	38.142	62.076	38.414	61.908	38.684	73
74	63.263	38.389	63.095	38.665	62.926	38.940	62.755	39.214	74
75	64.118	38.908	63.948	39.187	63.776	39.466	63.604	39.744	75
76	64.973	39.427	64.801	39.710	64.627	39.992	64.452	40.274	76
77	65.828	39.946	65.653	40.232	65.477	40.518	65.300	40.804	77
78	66.683	40.464	66.506	40.755	66.327	41.045	66.148	41.334	78
79	7.538	40.983	67.359	41.277	67.178	41.571	66.996	41.864	79
80	8.393	41.502	68.211	41.800	68.028	42.097	67.844	42.394	80
81	69.248	42.021	69.064	42.322	68.879	42.623	68.692	42.924	81
82	70.103	42.539	69.916	42.845	69.729	43.150	69.540	43.453	82
83	70.958	43.058	70.769	43.367	70.579	43.676	70.388	43.983	83
84	71.813	43.577	71.622	43.890	71.430	44.202	71.236	44.513	84
85	72.668	44.096	72.474	44.412	72.280	44.728	72.084	45.043	85
86	73.522	44.614	73.327	44.935	73.130	45.254	72.932	45.573	86
87	74.377	45.133	74.180	45.457	73.981	45.781	73.780	46.103	87
88	75.232	45.652	75.032	45.980	74.831	46.307	74.628	46.633	88
89	76.087	46.171	75.885	46.502	75.681	46.833	75.476	47.163	89
90	76.942	46.690	76.738	47.025	76.532	47.359	76.324	47.693	90
91	77.797	47.208	77.590	47.547	77.382	47.885	77.172	48.223	91
92	78.652	47.727	78.443	48.070	78.232	48.412	78.026	48.753	92
93	79.507	48.246	79.296	48.592	79.083	48.938	78.868	49.283	93
94	80.362	48.765	80.148	49.115	79.933	49.464	79.717	49.812	94
95	81.217	49.283	81.001	49.637	80.783	49.990	80.565	50.342	95
96	82.072	49.802	81.853	50.160	81.634	50.517	81.413	50.872	96
97	82.926	50.321	82.706	50.682	82.484	51.043	82.261	51.402	97
98	83.781	50.840	83.559	51.205	83.334	51.569	83.109	51.932	98
99	84.636	51.359	84.411	51.727	84.185	52.095	83.957	52.462	99
100	85.491	51.877	85.264	52.250	85.035	52.621	84.805	52.992	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	58 Degrees.								

Dist.	32 Degrees.						33 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.846	0.534	0.843	0.537	0.841	0.541	0.839	0.545	1
2	1.691	1.067	1.687	1.075	1.682	1.082	1.677	1.089	2
3	2.537	1.601	2.530	1.612	2.523	1.623	2.516	1.634	3
4	3.383	2.134	3.374	2.149	3.364	2.164	3.355	2.179	4
5	4.229	2.668	4.217	2.686	4.205	2.705	4.193	2.723	5
6	5.074	3.202	5.060	3.224	5.046	3.246	5.032	3.268	6
7	5.920	3.735	5.904	3.761	5.887	3.787	5.871	3.812	7
8	6.766	4.269	6.747	4.298	6.728	4.328	6.709	4.357	8
9	7.612	4.803	7.591	4.836	7.569	4.869	7.548	4.902	9
10	8.457	5.336	8.434	5.373	8.410	5.410	8.387	5.446	10
11	9.303	5.870	9.277	5.910	9.251	5.951	9.225	5.991	11
12	10.149	6.403	10.121	6.448	10.092	6.492	10.064	6.536	12
13	10.994	6.937	10.964	6.985	10.934	7.033	10.903	7.080	13
14	11.840	7.471	11.807	7.522	11.775	7.574	11.741	7.625	14
15	12.686	8.004	12.651	8.059	12.616	8.115	12.580	8.170	15
16	13.532	8.538	13.494	8.597	13.457	8.656	13.419	8.714	16
17	14.377	9.071	14.338	9.134	14.298	9.197	14.257	9.259	17
18	15.223	9.605	15.181	9.671	15.139	9.738	15.096	9.804	18
19	16.069	10.139	16.024	10.209	15.980	10.279	15.935	10.348	19
20	16.915	10.672	16.868	10.746	16.821	10.819	16.773	10.893	20
21	17.760	11.206	17.711	11.283	17.662	11.360	17.612	11.437	21
22	18.606	11.740	18.555	11.821	18.503	11.901	18.451	11.982	22
23	19.452	12.273	19.398	12.358	19.344	12.442	19.289	12.527	23
24	20.297	12.807	20.241	12.895	20.185	12.983	20.128	13.071	24
25	21.143	13.340	21.085	13.432	21.026	13.524	20.967	13.616	25
26	21.989	13.874	21.928	13.970	21.867	14.065	21.805	14.161	26
27	22.835	14.408	22.772	14.507	22.708	14.606	22.644	14.705	27
28	23.680	14.941	23.615	15.044	23.549	15.147	23.483	15.250	28
29	24.526	15.475	24.458	15.582	24.390	15.688	24.321	15.795	29
30	25.372	16.008	25.302	16.119	25.231	16.229	25.160	16.339	30
31	26.218	16.542	26.145	16.656	26.072	16.770	25.999	16.884	31
32	27.063	17.076	26.988	17.194	26.913	17.311	26.837	17.428	32
33	27.909	17.609	27.832	17.731	27.754	17.852	27.676	17.973	33
34	28.755	18.143	28.675	18.268	28.595	18.393	28.515	18.518	34
35	29.600	18.676	29.519	18.805	29.436	18.934	29.353	19.062	35
36	30.446	19.210	30.362	19.343	30.277	19.475	30.192	19.607	36
37	31.292	19.744	31.205	19.880	31.118	20.016	31.031	20.152	37
38	32.138	20.277	32.049	20.417	31.960	20.557	31.869	20.696	38
39	32.983	20.811	32.892	20.955	32.801	21.098	32.708	21.241	39
40	33.829	21.345	33.736	21.492	33.642	21.639	33.547	21.786	40
41	34.675	21.878	34.579	22.029	34.483	22.180	34.385	22.330	41
42	35.521	22.412	35.422	22.567	35.324	22.721	35.224	22.875	42
43	36.366	22.945	36.266	23.104	36.165	23.262	36.063	23.420	43
44	37.212	23.479	37.109	23.641	37.006	23.803	36.901	23.964	44
45	38.058	24.013	37.953	24.178	37.847	24.344	37.740	24.509	45
46	38.903	24.546	38.796	24.716	38.688	24.885	38.579	25.053	46
47	39.749	25.080	39.639	25.253	39.529	25.426	39.417	25.598	47
48	40.595	25.613	40.483	25.790	40.370	25.967	40.256	26.143	48
49	41.441	26.147	41.326	26.328	41.211	26.508	41.095	26.687	49
50	42.286	26.681	42.170	26.865	42.052	27.049	41.933	27.232	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	57 Degrees.								

Dist.	32 Degrees.						33 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	
51	43.132	27.214	43.013	27.402	42.893	27.590	42.772	27.777	51
52	43.978	27.748	43.856	27.940	43.734	28.131	43.611	28.321	52
53	44.824	28.282	44.700	28.477	44.575	28.672	44.450	28.866	53
54	45.669	28.815	45.543	29.014	45.416	29.213	45.288	29.411	54
55	46.515	29.349	46.386	29.551	46.257	29.754	46.127	29.955	55
56	47.361	29.882	47.230	30.089	47.098	30.295	46.966	30.500	56
57	48.206	30.416	48.073	30.626	47.939	30.836	47.804	31.044	57
58	49.052	30.950	48.917	31.163	48.780	31.376	48.643	31.589	58
59	49.898	31.483	49.760	31.701	49.621	31.917	49.482	32.134	59
60	50.744	32.017	50.603	32.238	50.462	32.458	50.320	32.678	60
61	51.589	32.550	51.447	32.775	51.303	32.999	51.159	33.223	61
62	52.435	33.084	52.290	33.313	52.144	33.540	51.998	33.768	62
63	53.281	33.618	53.134	33.850	52.986	34.081	52.836	34.312	63
64	54.127	34.151	53.977	34.387	53.827	34.622	53.675	34.857	64
65	54.972	34.685	54.820	34.924	54.668	35.163	54.514	35.402	65
66	55.818	35.219	55.664	35.462	55.509	35.704	55.352	35.946	66
67	56.664	35.752	56.507	35.999	56.350	36.245	56.191	36.491	67
68	57.510	36.286	57.351	36.536	57.191	36.786	57.030	37.036	68
69	58.355	36.819	58.194	37.074	58.032	37.327	57.868	37.580	69
70	59.201	37.353	59.037	37.611	58.873	37.868	58.707	38.125	70
71	60.047	37.887	59.881	38.148	59.714	38.409	59.546	38.669	71
72	60.892	38.420	60.724	38.686	60.555	38.950	60.384	39.214	72
73	61.738	38.954	61.567	39.223	61.396	39.491	61.223	39.759	73
74	62.584	39.487	62.411	39.760	62.237	40.032	62.062	40.303	74
75	63.430	40.021	63.254	40.297	63.078	40.573	62.900	40.848	75
76	64.275	40.555	64.098	40.835	63.919	41.114	63.739	41.393	76
77	65.121	41.088	64.941	41.372	64.760	41.655	64.578	41.937	77
78	65.967	41.622	65.784	41.909	65.601	42.196	65.416	42.482	78
79	66.813	42.156	66.628	42.447	66.442	42.737	66.255	43.027	79
80	67.658	42.689	67.471	42.984	67.283	43.278	67.094	43.571	80
81	68.504	43.223	68.315	43.521	68.124	43.819	67.932	44.116	81
82	69.350	43.756	69.158	44.059	68.965	44.360	68.771	44.660	82
83	70.195	44.290	70.001	44.596	69.806	44.901	69.610	45.205	83
84	71.041	44.824	70.845	45.133	70.647	45.441	70.448	45.750	84
85	71.887	45.357	71.688	45.670	71.488	45.982	71.287	46.294	85
86	72.733	45.891	72.532	46.208	72.329	46.524	72.126	46.839	86
87	73.578	46.424	73.375	46.745	73.170	47.065	72.964	47.384	87
88	74.424	46.958	74.218	47.282	74.012	47.606	73.803	47.928	88
89	75.270	47.492	75.062	47.820	74.853	48.147	74.642	48.473	89
90	76.116	48.025	75.905	48.357	75.694	48.688	75.480	49.018	90
91	76.961	48.559	76.749	48.894	76.535	49.229	76.319	49.562	91
92	77.807	49.092	77.592	49.432	77.376	49.770	77.158	50.107	92
93	78.653	49.626	78.435	49.969	78.217	50.311	77.996	50.652	93
94	79.498	50.160	79.279	50.506	79.058	50.852	78.835	51.196	94
95	80.344	50.693	80.122	51.043	79.899	51.393	79.674	51.741	95
96	81.190	51.227	80.965	51.581	80.740	51.934	80.512	52.285	96
97	82.036	51.761	81.809	52.118	81.581	52.474	81.351	52.830	97
98	82.881	52.294	82.652	52.655	82.422	53.015	82.190	53.375	98
99	83.727	52.828	83.496	53.193	83.263	53.556	83.028	53.919	99
100	84.573	53.361	84.339	53.730	84.104	54.097	83.867	54.464	100
Dist.	E. W.	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	57 Degrees.								

Dist.	33 Degrees.						34 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.836	0.548	0.834	0.552	0.831	0.556	0.829	0.559	1
2	1.673	1.097	1.668	1.104	1.663	1.111	1.658	1.118	2
3	2.509	1.645	2.502	1.650	2.494	1.667	2.487	1.678	3
4	3.345	2.193	3.336	2.208	3.326	2.222	3.316	2.237	4
5	4.181	2.741	4.169	2.760	4.157	2.778	4.145	2.796	5
6	5.018	3.290	5.003	3.312	4.989	3.333	4.974	3.355	6
7	5.854	3.838	5.837	3.864	5.820	3.889	5.803	3.914	7
8	6.690	4.386	6.671	4.415	6.652	4.445	6.632	4.474	8
9	7.527	4.935	7.505	4.967	7.483	5.000	7.461	5.033	9
10	8.363	5.483	8.339	5.519	8.315	5.556	8.290	5.592	10
11	9.199	6.031	9.173	6.071	9.146	6.111	9.119	6.151	11
12	10.035	6.580	10.007	6.623	9.978	6.667	9.948	6.710	12
13	10.872	7.128	10.841	7.175	10.809	7.222	10.777	7.270	13
14	11.708	7.676	11.674	7.727	11.641	7.778	11.607	7.829	14
15	12.544	8.224	12.508	8.279	12.472	8.334	12.436	8.388	15
16	13.381	8.773	13.342	8.831	13.304	8.889	13.265	8.947	16
17	14.217	9.321	14.176	9.383	14.135	9.445	14.094	9.506	17
18	15.053	9.869	15.010	9.935	14.966	10.000	14.923	10.065	18
19	15.889	10.418	15.844	10.487	15.798	10.556	15.752	10.625	19
20	16.726	10.966	16.678	11.039	16.629	11.111	16.581	11.184	20
21	17.562	11.514	17.512	11.591	17.461	11.667	17.410	11.743	21
22	18.398	12.062	18.345	12.143	18.292	12.223	18.239	12.302	22
23	19.235	12.611	19.179	12.695	19.124	12.778	19.068	12.861	23
24	20.071	13.159	20.013	13.246	19.955	13.334	19.897	13.421	24
25	20.907	13.707	20.847	13.798	20.787	13.889	20.726	13.980	25
26	21.743	14.256	21.681	14.350	21.618	14.445	21.555	14.539	26
27	22.580	14.804	22.515	14.902	22.450	15.000	22.384	15.098	27
28	23.416	15.352	23.349	15.454	23.281	15.556	23.213	15.657	28
29	24.252	15.900	24.183	16.006	24.113	16.112	24.042	16.217	29
30	25.089	16.449	25.017	16.558	24.944	16.667	24.871	16.776	30
31	25.925	16.997	25.850	17.110	25.776	17.223	25.700	17.335	31
32	26.761	17.545	26.684	17.662	26.607	17.778	26.529	17.894	32
33	27.597	18.094	27.518	18.214	27.439	18.334	27.358	18.453	33
34	28.434	18.642	28.352	18.766	28.270	18.889	28.187	19.013	34
35	29.270	19.190	29.186	19.318	29.101	19.445	29.016	19.572	35
36	30.106	19.739	30.020	19.870	29.933	20.001	29.845	20.131	36
37	30.943	20.287	30.854	20.422	30.764	20.556	30.674	20.690	37
38	31.779	20.835	31.688	20.974	31.596	21.112	31.503	21.249	38
39	32.615	21.383	32.522	21.526	32.427	21.667	32.332	21.809	39
40	33.451	21.932	33.355	22.077	33.259	22.223	33.162	22.368	40
41	34.288	22.480	34.189	22.629	34.090	22.778	33.991	22.927	41
42	35.124	23.028	35.023	23.181	34.922	23.334	34.820	23.486	42
43	35.960	23.577	35.857	23.733	35.753	23.890	35.649	24.045	43
44	36.797	24.125	36.691	24.285	36.585	24.445	36.478	24.604	44
45	37.633	24.673	37.525	24.837	37.416	25.001	37.307	25.164	45
46	38.469	25.221	38.359	25.389	38.248	25.556	38.136	25.723	46
47	39.305	25.770	39.193	25.941	39.079	26.112	38.965	26.282	47
48	40.142	26.318	40.027	26.493	39.911	26.667	39.794	26.841	48
49	40.978	26.866	40.860	27.045	40.742	27.223	40.623	27.400	49
50	41.814	27.415	41.694	27.597	41.573	27.778	41.452	27.960	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	56 Degrees.								

Dist.	33 Degrees.						34 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	42.651	27.963	42.528	28.149	42.405	28.334	42.281	28.519	51
52	43.487	28.511	43.362	28.701	43.236	28.890	43.110	29.078	52
53	44.323	29.060	44.196	29.253	44.068	29.445	43.939	29.637	53
54	45.159	29.608	45.030	29.805	44.899	30.001	44.768	30.196	54
55	45.996	30.156	45.864	30.357	45.731	30.556	45.597	30.756	55
56	46.832	30.704	46.698	30.908	46.562	31.112	46.426	31.315	56
57	47.668	31.253	47.532	31.460	47.394	31.667	47.255	31.874	57
58	48.505	31.801	48.365	32.012	48.225	32.223	48.084	32.433	58
59	49.341	32.349	49.199	32.564	49.057	32.779	48.913	32.992	59
60	50.177	32.898	50.033	33.116	49.888	33.334	49.742	33.552	60
61	51.013	33.446	50.867	33.668	50.720	33.890	50.571	34.111	61
62	51.850	33.994	51.701	34.220	51.551	34.445	51.400	34.670	62
63	52.686	34.542	52.535	34.772	52.383	35.001	52.229	35.229	63
64	53.522	35.091	53.369	35.324	53.214	35.556	53.058	35.788	64
65	54.359	35.639	54.203	35.876	54.046	36.112	53.887	36.348	65
66	55.195	36.187	55.036	36.428	54.877	36.668	54.717	36.907	66
67	56.031	36.736	55.870	36.980	55.708	37.223	55.546	37.466	67
68	56.867	37.284	56.704	37.532	56.540	37.779	56.375	38.025	68
69	57.704	37.832	57.538	38.084	57.371	38.334	57.204	38.584	69
70	58.540	38.381	58.372	38.635	58.203	38.890	58.033	39.144	70
71	59.376	38.929	59.206	39.188	59.034	39.445	58.862	39.703	71
72	60.213	39.477	60.040	39.739	59.866	40.001	59.691	40.262	72
73	61.049	40.025	60.874	40.291	60.697	40.557	60.520	40.821	73
74	61.885	40.574	61.708	40.843	61.529	41.112	61.349	41.380	74
75	62.721	41.122	62.541	41.395	62.360	41.668	62.178	41.939	75
76	63.558	41.670	63.375	41.947	63.192	42.223	63.007	42.499	76
77	64.394	42.219	64.209	42.499	64.023	42.779	63.836	43.058	77
78	65.230	42.767	65.043	43.051	64.855	43.334	64.665	43.617	78
79	66.067	43.315	65.877	43.603	65.686	43.890	65.494	44.176	79
80	66.903	43.863	66.711	44.155	66.518	44.446	66.323	44.735	80
81	67.739	44.412	67.545	44.707	67.349	45.001	67.152	45.295	81
82	68.575	44.960	68.379	45.259	68.181	45.557	67.981	45.854	82
83	69.412	45.508	69.213	45.811	69.012	46.112	68.810	46.413	83
84	70.248	46.057	70.046	46.363	69.843	46.668	69.639	46.972	84
85	71.084	46.605	70.880	46.915	70.675	47.223	70.468	47.531	85
86	71.921	47.153	71.714	47.467	71.506	47.779	71.297	48.091	86
87	72.757	47.701	72.548	48.019	72.338	48.335	72.126	48.650	87
88	73.593	48.250	73.382	48.570	73.169	48.890	72.955	49.209	88
89	74.429	48.798	74.216	49.122	74.001	49.446	73.784	49.768	89
90	75.266	49.346	75.050	49.674	74.832	50.001	74.613	50.327	90
91	76.102	49.895	75.884	50.226	75.664	50.557	75.442	50.887	91
92	76.938	50.443	76.718	50.778	76.495	51.112	76.271	51.446	92
93	77.775	50.991	77.551	51.330	77.327	51.668	77.101	52.005	93
94	78.611	51.540	78.385	51.882	78.158	52.224	77.930	52.564	94
95	79.447	52.088	79.219	52.434	78.990	52.779	78.759	53.123	95
96	80.283	52.636	80.053	52.986	79.821	53.335	79.588	53.683	96
97	81.120	53.184	80.887	53.538	80.653	53.890	80.417	54.242	97
98	81.956	53.733	81.721	54.090	81.484	54.446	81.246	54.801	98
99	82.792	54.281	82.555	54.642	82.316	55.001	82.075	55.360	99
100	83.629	54.829	83.389	55.194	83.147	55.557	82.904	55.919	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	56 Degrees.								

Diſt.	34 Degrees.						35 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.827	0.563	0.824	0.566	0.822	0.570	0.819	0.574	1
2	1.653	1.126	1.648	1.133	1.643	1.140	1.638	1.147	2
3	2.480	1.688	2.472	1.699	2.465	1.710	2.457	1.721	3
4	3.306	2.251	3.297	2.266	3.287	2.280	3.277	2.294	4
5	4.133	2.814	4.121	2.832	4.108	2.850	4.096	2.868	5
6	4.960	3.377	4.945	3.398	4.930	3.420	4.915	3.441	6
7	5.786	3.940	5.769	3.965	5.752	3.990	5.734	4.015	7
8	6.613	4.502	6.593	4.531	6.573	4.560	6.553	4.589	8
9	7.439	5.065	7.417	5.098	7.395	5.130	7.372	5.162	9
10	8.266	5.628	8.241	5.664	8.216	5.700	8.192	5.736	10
11	9.092	6.191	9.065	6.230	9.038	6.270	9.011	6.309	11
12	9.919	6.754	9.890	6.796	9.860	6.840	9.830	6.883	12
13	10.746	7.316	10.714	7.363	10.681	7.410	10.649	7.456	13
14	11.572	7.879	11.538	7.930	11.503	7.980	11.468	8.030	14
15	12.399	8.442	12.362	8.496	12.325	8.550	12.287	8.604	15
16	13.225	9.005	13.186	9.062	13.146	9.120	13.106	9.177	16
17	14.052	9.568	14.010	9.629	13.968	9.690	13.926	9.751	17
18	14.879	10.130	14.834	10.195	14.790	10.260	14.745	10.324	18
19	15.705	10.693	15.658	10.762	15.611	10.830	15.564	10.898	19
20	16.532	11.256	16.483	11.328	16.433	11.400	16.383	11.472	20
21	17.358	11.819	17.307	11.895	17.255	11.970	17.202	12.045	21
22	18.185	12.382	18.131	12.461	18.076	12.540	18.021	12.619	22
23	19.012	12.945	18.955	13.027	18.898	13.110	18.840	13.192	23
24	19.838	13.507	19.779	13.594	19.720	13.680	19.660	13.766	24
25	20.665	14.070	20.603	14.160	20.541	14.250	20.479	14.339	25
26	21.491	14.633	21.427	14.727	21.363	14.820	21.298	14.913	26
27	22.318	15.196	22.251	15.293	22.184	15.390	22.117	15.487	27
28	23.145	15 759	23.076	15.859	23.006	15.960	22.936	16.060	28
29	23.971	16.321	23.900	16.426	23.828	16.530	23.755	16.634	29
30	24.798	16.884	24.724	16.992	24.649	17.100	24.575	17.207	30
31	25.624	17.447	25.548	17.559	25.471	17.670	25.394	17.781	31
32	26.451	18.010	26.372	18.125	26.293	18.240	26.213	18.354	32
33	27.277	18.573	27.196	18.691	27.114	18.810	27.032	18.928	33
34	28.104	19.135	28.020	19.258	27.936	19.380	27.851	19.502	34
35	28.931	19.698	28.844	19.824	28.758	19.950	28.670	20.075	35
36	29.757	20.261	29.669	20.391	29.579	20.520	29.489	20.649	36
37	30.584	20.824	30.493	20.957	30.401	21.090	30.309	21.222	37
38	31.410	21.387	31.317	21.523	31.223	21.660	31.128	21.796	38
39	32.237	21.949	32.141	22.090	32.044	22.230	31.947	22.369	39
40	33.064	22.512	32.965	22.656	32.866	22.800	32.766	22.943	40
41	33.890	23.075	33.789	23.223	33.68	23.370	33.585	23.517	41
42	34.717	23.638	34.613	23 789	34.509	23.940	34.404	24.090	42
43	35.543	24.201	35 437	24.355	35.331	24.510	35.224	24.664	43
44	36.370	24.763	36.262	24.922	36.152	25.080	36.043	25.237	44
45	37.197	25.326	37.086	25.488	36.974	25.650	36.862	25.811	45
46	38.023	25.889	37.910	26.055	37.796	26.220	37.681	26.384	46
47	38.850	26.452	38.734	26.621	38.617	26.790	38.500	26.958	47
48	39.676	27.015	39.558	27.187	39.439	27.360	39.319	27.532	48
49	40.503	27.577	40.382	27.754	40.261	27.930	40.138	28.105	49
50	41.329	28.140	41.206	28.320	41.082	28.500	40.958	28.679	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	55 Degrees.								

Dist.	34 Degrees.						35 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	42.156	28.703	42.030	28.887	41.904	29.070	41.777	29.252	51
52	42.983	29.266	42.855	29.453	42.726	29.640	42.596	29.826	52
53	43.809	29.829	43.679	30.020	43.547	30.210	43.415	30.400	53
54	44.636	30.391	44.503	30.586	44.369	30.780	44.234	30.973	54
55	45.462	30.954	45.327	31.152	45.191	31.350	45.053	31.547	55
56	46.289	31.517	46.151	31.719	46.012	31.920	45.873	32.120	56
57	47.116	32.080	46.975	32.285	46.834	32.490	46.692	32.694	57
58	47.942	32.643	47.799	32.852	47.656	33.060	47.511	33.267	58
59	48.769	33.205	48.623	33.418	48.477	33.630	48.330	33.841	59
60	49.595	33.768	49.448	33.984	49.299	34.200	49.149	34.415	60
61	50.422	34.331	50.272	34.551	50.120	34.770	49.968	34.988	61
62	51.249	34.894	51.096	35.117	50.942	35.340	50.787	35.562	62
63	52,075	35.457	51.920	35.684	51.763	35.910	51.607	36.135	63
64	52.902	36.020	52.744	36.250	52.585	36.480	52.426	36.709	64
65	53.728	36.582	53.568	36.816	53.407	37.050	53.245	37.282	65
66	54.555	37.145	54.392	37.383	54.229	37.620	54.064	37.856	66
67	55.382	37.708	55.216	37.949	55.050	38.190	54.883	38.430	67
68	56.208	38.271	56.041	38.516	55.872	38.760	55.702	39.003	68
69	57.035	38.834	56.865	39.082	56.694	39.330	56.521	39.577	69
70	57.861	39.396	57.689	39.648	57.515	39.900	57.341	40.150	70
71	58.688	39.959	58.513	40.215	58.337	40.470	58.160	40.724	71
72	59.514	40.522	59.337	40.781	59.159	41.040	58.979	41.297	72
73	60.341	41.085	60.161	41.348	59.980	41.610	59.798	41.871	73
74	61.167	41.648	60.985	41.914	60.802	42.180	60.617	42.445	74
75	61.994	42.210	61.809	42.480	61.624	42.750	61.436	43.018	75
76	62.821	42.773	62.634	43.047	62.445	43.320	62.256	43.592	76
77	63.647	43.336	63.458	43.613	63.267	43.890	63.075	44.165	77
78	64.474	43.899	64.282	44.180	64.088	44.460	63.894	44.739	78
79	65.301	44.462	65.106	44.746	64.910	45.030	64.713	45.313	79
80	66.127	45.024	65.930	45.312	65.732	45.600	65.532	45.886	80
81	66.954	45.587	66.754	45.879	66.553	46.170	66.351	46.460	81
82	67.780	46.150	67.578	46.445	67.375	46.740	67.170	47.033	82
83	68.607	46.713	68.402	47.012	68.197	47.310	67.990	47.607	83
84	69.434	47.276	69.227	47.578	69.018	47.880	68.809	48.180	84
85	70.260	47.838	70.051	48.145	69.840	48.450	69.628	48.754	85
86	71.087	48.401	70.875	48.711	70.662	49.020	70.447	49.328	86
87	71.913	48.964	71.699	49.277	71.483	49.590	71.266	49.901	87
88	72.740	49.527	72.523	49.844	72.305	50.160	72.085	50.475	88
89	73.567	50.090	73.347	50.410	73.127	50.730	72.905	51.048	89
90	74.393	50.652	74.171	50.977	73.948	51.300	73.724	51.622	90
91	75.220	51.215	74.995	51.543	74.770	51.870	74.543	52.195	91
92	76.046	51.778	75.820	52.109	75.592	52.440	75.362	52.769	92
93	76.873	52.341	76.644	52.676	76.413	53.010	76.181	53.343	93
94	77.699	52.904	77.468	53.242	77.235	53.580	77.000	53.916	94
95	78.526	53.466	78.292	53.809	78.056	54.150	77.819	54.490	95
96	79.353	54.029	79.116	54.375	78.878	54.720	78.639	55.063	96
97	80.179	54.592	79.940	54.941	79.700	55.290	79.458	55.637	97
98	81,006	55.155	80.764	55.508	80.521	55.860	80.277	56.210	98
99	81.832	55.718	81.588	56.074	81.343	56.430	81.096	56.784	99
100	82.659	56.280	82.413	56,641	82.165	57.000	81.915	57.358	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	55 Degrees.								

Dist.	35 Degrees.						36 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W	
1	0.817	0.577	0.814	0.581	0.812	0.584	0.809	0.588	1
2	1.633	1.154	1.628	1.161	1.623	1.168	1.618	1.176	2
3	2.450	1.731	2.442	1.742	2.435	1.753	2.427	1.763	3
4	3.267	2.309	3.256	2.323	3.246	2.337	3.236	2.351	4
5	4.083	2.886	4.071	2.904	4.058	2.921	4.045	2.939	5
6	4.900	3.463	4.885	3.484	4.869	3.505	4.854	3.527	6
7	5.716	4.040	5.699	4.065	5.681	4.090	5.663	4.114	7
8	6.533	4.617	6.513	4.646	6.493	4.674	6.472	4.702	8
9	7.350	5.194	7.327	5.226	7.304	5.258	7.281	5.290	9
10	8.166	5.771	8.141	5.807	8.116	5.842	8.090	5.878	10
11	8.983	6.349	8.955	6.388	8.927	6.427	8.899	6.466	11
12	9.800	6.926	9.769	6.968	9.739	7.011	9.708	7.053	12
13	10.616	7.503	10.584	7.549	10.550	7.595	10.517	7.641	13
14	11.433	8.080	11.398	8.130	11.362	8.179	11.326	8.229	14
15	12.250	8.657	12.212	8.711	12.174	8.764	12.135	8.817	15
16	13.066	9.234	13.026	9.291	12.985	9.348	12.944	9.405	16
17	13.883	9.811	13.840	9.872	13.797	9.932	13.753	9.992	17
18	14.700	10.389	14.654	10.453	14.608	10.516	14.562	10.580	18
19	15.516	10.966	15.468	11.033	15.420	11.101	15.371	11.168	19
20	16.333	11.543	16.282	11.614	16.231	11.685	16.180	11.756	20
21	17.149	12.120	17.096	12.195	17.043	12.269	16.989	12.343	21
22	17.966	12.697	17.911	12.775	17.855	12.853	17.798	12.931	22
23	18.783	13.274	18.725	13.356	18.666	13.438	18.607	13.519	23
24	19.599	13.851	19.539	13.937	19.478	14.022	19.416	14.107	24
25	20.416	14.429	20.353	14.518	20.289	14.606	20.225	14.695	25
26	21.233	15.006	21.167	15.098	21.101	15.190	21.034	15.282	26
27	22.049	15.583	21.981	15.679	21.912	15.775	21.843	15.870	27
28	22.866	16.160	22.795	16.260	22.724	16.359	22.652	16.458	28
29	23.683	16.737	23.609	16.840	23.536	16.943	23.461	17.046	29
30	24.499	17.314	24.423	17.421	24.347	17.527	24.271	17.634	30
31	25.316	17.891	25.238	18.002	25.159	18.112	25.080	18.221	31
32	26.133	18.469	26.052	18.582	25.970	18.696	25.889	18.809	32
33	26.949	19.046	26.866	19.163	26.782	19.280	26.698	19.397	33
34	27.766	19.623	27.680	19.744	27.594	19.864	27.507	19.985	34
35	28.582	20.200	28 494	20.325	28.405	20.449	28.316	20.572	35
36	29.399	20.777	29.308	20.905	29.217	21.033	29.125	21.160	36
37	30.216	21.354	30.122	21.486	30.028	21.617	29.934	21.748	37
38	31.032	21.932	30.936	22.067	30.840	22.201	30.743	22.336	38
39	31.849	22.509	31.751	22.647	31 651	22.786	31.552	22.924	39
40	32.666	23.086	32.565	23.228	32.463	23.370	32.361	23.511	40
41	33.482	23.663	33.379	23.809	33.275	23.954	33.170	24.099	41
42	34.299	24.240	34.193	24.390	34.086	24.538	33.979	24.687	42
43	35.116	24.817	35.007	24.970	34.898	25.123	34.788	25.275	43
44	35.932	25.394	35.821	25.551	35.709	25.707	35.597	25.863	44
45	36.749	25.972	36.635	26.132	36.521	26.291	36.406	26.450	45
46	37.566	26.549	37 449	26.712	37.332	26.875	37.215	27.038	46
47	38.382	27.126	38.263	27.293	38.144	27.460	38.024	27.626	47
48	39.199	27.703	39.078	27.874	38.956	28.044	38.833	28.214	48
49	40.015	28.280	39.892	28.454	39.767	28.628	39 642	28.801	49
50	40.832	28.857	40.706	29.035	40.579	29.212	40.451	29.389	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	54 Degrees.								

Dist.	35 Degrees.						36 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	41.649	29.434	41.519	29.616	41.390	29.797	41.260	29.977	51
52	42.465	30.012	42.334	30.197	42.202	30.381	42.069	30.565	52
53	43.282	30.589	43.148	30.777	43.013	30.965	42.878	31.153	53
54	44.099	31.166	43.962	31.358	43.825	31.549	43.687	31.740	54
55	44.915	31.743	44.776	31.939	44.637	32.134	44.496	32.328	55
56	45.732	32.320	45.590	32.519	45.448	32.718	45.305	32.916	56
57	46.549	32.897	46.405	33.100	46.260	33.302	46.114	33.504	57
58	47.365	33.474	47.219	33.681	47.071	33.886	46.923	34.092	58
59	48.182	34.052	48.033	34.261	47.883	34.471	47.732	34.679	59
60	48.999	34.629	48.847	34.842	48.694	35.055	48.541	35.267	60
61	49.815	35.206	49.661	35.423	49.506	35.639	49.350	35.855	61
62	50.632	35.783	50.475	36.004	50.318	36.223	50.159	36.443	62
63	51.448	36.360	51.289	36.584	51.129	36.808	50.968	37.030	63
64	52.265	36.937	52.103	37.165	51.941	37.392	51.777	37.618	64
65	53.082	37.514	52.918	37.746	52.752	37.976	52.586	38.206	65
66	53.898	38.092	53.732	38.326	53.564	38.560	53.395	38.794	66
67	54.715	38.669	54.546	38.907	54.375	39.145	54.204	39.382	67
68	55.532	39.246	55.360	39.488	55.187	39.729	55.013	39.969	68
69	56.348	39.823	56.174	40.069	55.999	40.313	55.822	40.557	69
70	57.165	40.400	56.988	40.649	56.810	40.897	56.631	41.146	70
71	57.982	40.977	57.802	41.230	57.622	41.482	57.440	41.733	71
72	58.798	41.554	58.616	41.811	58.433	42.066	58.249	42.320	72
73	59.615	42.132	59.430	42.391	59.245	42.650	59.058	42.908	73
74	60.432	42.709	60.245	42.972	60.056	43.234	59.867	43.496	74
75	61.248	43.286	61.059	43.553	60.868	43.819	60.676	44.084	75
76	62.065	43.863	61.873	44.133	61.680	44.403	61.485	44.672	76
77	62.881	44.440	62.687	44.714	62.491	44.987	62.294	45.259	77
78	63.698	45.017	63.501	45.295	63.303	45.571	63.103	45.847	78
79	64.515	45.594	64.315	45.870	64.114	46.156	63.912	46.435	79
80	65.331	46.172	65.129	46.456	64.926	46.740	64.721	47.023	80
81	66.148	46.749	65.943	47.037	65.737	47.324	65.530	47.611	81
82	66.965	47.326	66.758	47.618	66.549	47.908	66.339	48.198	82
83	67.781	47.903	67.572	48.198	67.361	48.493	67.148	48.786	83
84	68.598	48.480	68.386	48.779	68.172	49.077	67.957	49.374	84
85	69.415	49.057	69.200	49.360	68.984	49.661	68.766	49.962	85
86	70.231	49.634	70.014	49.940	69.795	50.245	69.575	50.550	86
87	71.048	50.212	70.828	50.521	70.607	50.830	70.384	51.137	87
88	71.864	50.789	71.642	51.102	71.419	51.414	71.193	51.725	88
89	72.681	51.366	72.456	51.683	72.230	51.998	72.003	52.313	89
90	73.498	51.943	73.270	52.263	73.042	52.582	72.812	52.901	90
91	74.314	52.520	74.085	52.844	73.853	53.167	73.621	53.488	91
92	75.131	53.097	74.899	53.425	74.665	53.751	74.430	54.076	92
93	75.948	53.674	75.713	54.005	75.476	54.335	75.239	54.664	93
94	76.764	54.252	76.527	54.586	76.288	54.919	76.048	55.252	94
95	77.581	54.829	77.341	55.167	77.100	55.504	76.857	55.840	95
96	78.398	55.406	78.155	55.747	77.911	56.088	77.666	56.427	96
97	79.214	55.983	78.969	56.328	78.723	56.672	78.475	57.015	97
98	80.031	56.560	79.783	56.909	79.534	57.256	79.284	57.603	98
99	80.848	57.137	80.597	57.490	80.346	57.841	80.093	58.191	99
100	81.664	57.714	81.412	58.070	81.157	58.425	80.902	58.778	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	54 Degrees.								

Dist.	36 Degrees.						37 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.806	0.591	0.804	0.595	0.801	0.598	0.799	0.602	1
2	1.613	1.183	1.608	1.190	1.603	1.197	1.597	1.204	2
3	2.419	1.774	2.412	1.784	2.404	1.795	2.396	1.805	3
4	3.226	2.365	3.215	2.379	3.205	2.393	3.195	2.407	4
5	4.032	2.956	4.019	2.974	4.006	2.992	3.993	3.009	5
6	4.839	3.548	4.823	3.569	4.808	3.590	4.792	3.611	6
7	5.645	4.139	5.627	4.164	5.609	4.188	5.590	4.213	7
8	6.451	4.730	6.431	4.759	6.410	4.787	6.389	4.815	8
9	7.258	5.322	7.235	5.353	7.211	5.385	7.188	5.416	9
10	8.064	5.913	8.039	5.948	8.013	5.983	7.986	6.018	10
11	8.871	6.504	8.842	6.543	8.814	6.582	8.785	6.620	11
12	9.677	7.096	9.646	7.138	9.615	7.180	9.584	7.222	12
13	10.484	7.687	10.450	7.733	10.416	7.778	10.382	7.824	13
14	11.290	8.278	11.254	8.328	11.218	8.377	11.181	8.425	14
15	12.097	8.870	12.058	8.922	12.019	8.975	11.980	9.027	15
16	12.903	9.461	12.862	9.517	12.820	9.573	12.778	9.629	16
17	13.710	10.052	13.666	10.112	13.621	10.172	13.577	10.231	17
18	14.516	10.644	14.469	10.707	14.423	10.770	14.375	10.833	18
19	15.322	11.235	15.273	11.302	15.224	11.368	15.174	11.434	19
20	16.129	11.826	16.077	11.896	16.025	11.966	15.973	12.036	20
21	16.935	12.418	16.881	12.491	16.826	12.565	16.771	12.638	21
22	17.742	13.009	17.685	13.086	17.628	13.163	17.570	13.240	22
23	18.548	13.600	18.489	13.681	18.429	13.761	18.369	13.842	23
24	19.355	14.191	19.293	14.276	19.230	14.360	19.167	14.444	24
25	20.161	14.783	20.096	14.871	20.031	14.958	19.966	15.045	25
26	20.968	15.374	20.900	15.465	20.833	15.556	20.765	15.647	26
27	21.774	15.965	21.704	16.060	21.634	16.155	21.563	16.249	27
28	22.580	16.557	22.508	16.655	22.435	16.753	22.362	16.851	28
29	23.387	17.148	23.312	17.250	23.236	17.351	23.160	17.453	29
30	24.193	17.739	24.116	17.845	24.038	17.950	23.959	18.054	30
31	25.000	18.331	24.920	18.440	24.839	18.548	24.758	18.656	31
32	25.806	18.922	25.723	19.034	25.640	19.146	25.556	19.258	32
33	26.613	19.513	26.527	19.629	26.441	19.745	26.355	19.860	33
34	27.419	20.105	27.331	20.224	27.243	20.343	27.154	20.462	34
35	28.226	20.696	28.135	20.819	28.044	20.941	27.952	21.064	35
36	29.032	21.287	28.939	21.414	28.845	21.540	28.751	21.665	36
37	29.838	21.878	29.743	22.008	29.646	22.138	29.550	22.267	37
38	30.645	22.470	30.547	22.603	30.448	22.736	30.348	22.869	38
39	31.451	23.061	31.350	23.198	31.249	23.335	31.147	23.471	39
40	32.258	23.652	32.154	23.793	32.050	23.933	31.945	24.073	40
41	33.064	24.244	32.958	24.388	32.851	24.531	32.744	24.674	41
42	33.871	24.835	33.762	24.983	33.653	25.130	33.543	25.276	42
43	34.677	25.426	34.566	25.577	34.454	25.728	34.341	25.878	43
44	35.484	26.018	35.370	26.172	35.255	26.326	35.140	26.480	44
45	36.290	26.609	36.174	26.767	36.056	26.925	35.939	27.082	45
46	37.096	27.200	36.977	27.362	36.858	27.523	36.737	27.683	46
47	37.903	27.792	37.781	27.957	37.659	28.121	37.536	28.285	47
48	38.709	28.383	38.585	28.552	38.460	28.720	38.335	28.887	48
49	39.516	28.974	39.389	29.146	39.261	29.318	39.133	29.489	49
50	40.322	29.565	40.193	29.741	40.063	29.916	39.932	30.091	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	53 Degrees.								

Dist.	36 Degrees.						37 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	41.129	30.157	40.997	30.336	40.864	30.515	40.730	30.693	51
52	41.935	30.748	41.801	30.931	41.665	31.113	41.529	31.294	52
53	42.742	31.339	42.604	31.526	42.466	31.711	42.328	31.896	53
54	43.548	31.931	43.408	32.120	43.268	32.310	43.126	32.498	54
55	44.354	32.522	44.212	32.715	44.069	32.908	43.925	33.100	55
56	45.161	33.113	45.016	33.310	44.870	33.506	44.724	33.702	56
57	45.967	33.705	45.820	33.905	45.671	34.105	45.522	34.303	57
58	46.774	34.296	46.624	34.500	46.473	34.703	46.321	34.905	58
59	47.580	34.887	47.428	35.095	47.274	35.301	47.120	35.507	59
60	48.387	35.479	48.231	35.689	48.075	35.899	47.918	36.109	60
61	49.193	36.070	49.035	36.284	48.876	36.498	48.717	36.711	61
62	50.000	36.661	49.839	36.879	49.678	37.096	49.515	37.313	62
63	50.806	37.253	50.643	37.474	50.479	37.694	50.314	37.914	63
64	51.612	37.844	51.447	38.069	51.280	38.293	51.113	38.516	64
65	52.419	38.435	52.251	38.663	52.082	38.891	51.911	39.118	65
66	53.225	39.026	53.055	39.258	52.883	39.489	52.710	39.720	66
67	54.032	39.618	53.858	39.853	53.684	40.088	53.509	40.322	67
68	54.838	40.209	54.662	40.448	54.485	40.686	54.307	40.923	68
69	55.645	40.800	55.466	41.043	55.287	41.284	55.106	41.525	69
70	56.451	41.392	56.270	41.638	56.088	41.883	55.905	42.127	70
71	57.258	41.983	57.074	42.232	56.889	42.481	56.703	42.729	71
72	58.064	42.574	57.878	42.827	57.690	43.079	57.502	43.331	72
73	58.870	43.166	58.682	43.422	58.492	43.678	58.300	43.932	73
74	59.677	43.757	59.485	44.017	59.293	44.276	59.099	44.534	74
75	60.483	44.348	60.289	44.612	60.094	44.874	59.898	45.136	75
76	61.290	44.940	61.093	45.207	60.895	45.473	60.696	45.738	76
77	62.096	45.531	61.897	45.801	61.697	46.071	61.495	46.340	77
78	62.903	46.122	62.701	46.396	62.498	46.669	62.294	46.942	78
79	63.709	46.713	63.505	46.991	63.299	47.268	63.092	47.544	79
80	64.516	47.305	64.309	47.586	64.100	47.866	63.891	48.145	80
81	65.322	47.896	65.112	48.181	64.901	48.464	64.690	48.747	81
82	66.128	48.487	65.916	48.775	65.703	49.063	65.488	49.349	82
83	66.935	49.079	66.720	49.370	66.504	49.661	66.287	49.951	83
84	67.741	49.670	67.524	49.965	67.305	50.259	67.085	50.562	84
85	68.548	50.261	68.328	50.560	68.107	50.858	67.884	51.154	85
86	69.354	50.853	69.132	51.155	68.908	51.456	68.683	51.756	86
87	70.161	51.444	69.936	51.750	69.709	52.054	69.481	52.358	87
88	70.967	52.035	70.739	52.344	70.510	52.653	70.280	52.960	88
89	71.774	52.627	71.543	52.939	71.312	53.251	71.079	53.562	89
90	72.580	53.218	72.347	53.534	72.113	53.849	71.877	54.163	90
91	73.386	53.809	73.151	54.129	72.914	54.448	72.676	54.765	91
92	74.193	54.401	73.955	54.724	73.715	55.046	73.475	55.367	92
93	74.999	54.992	74.759	55.319	74.517	55.644	74.273	55.969	93
94	75.806	55.583	75.563	55.913	75.318	56.243	75.072	56.571	94
95	76.612	56.174	76.366	56.508	76.119	56.841	75.870	57.172	95
96	77.419	56.766	77.170	57.103	76.920	57.439	76.669	57.774	96
97	78.225	57.357	77.974	57.698	77.722	58.038	77.468	58.376	97
98	79.032	57.948	78.778	58.293	78.523	58.636	78.266	58.978	98
99	79.83	58.540	79.582	58.887	79.324	59.234	79.065	59.580	99
100	80.64	59.131	80.386	59.482	80.125	59.832	79.864	60.181	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	53 Degrees.								

Diſt.	37 Degrees.						38 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.796	0.605	0.793	0.609	0.791	0.612	0.788	0.616	1
2	1.592	1.211	1.587	1.218	1.581	1.224	1.576	1.231	2
3	2.388	1.816	2.380	1.826	2.372	1.837	2.364	1.847	3
4	3.184	2.421	3.173	2.435	3.163	2.449	3.152	2.463	4
5	3.980	3.026	3.967	3.044	3.953	3.061	3.940	3.078	5
6	4.776	3.632	4.760	3.653	4.744	3.673	4.728	3.694	6
7	5.572	4.237	5.553	4.261	5.535	4.286	5.516	4.310	7
8	6.368	4.842	6.347	4.870	6.326	4.898	6.304	4.925	8
9	7.164	5.448	7.140	5.479	7.116	5.510	7.092	5.541	9
10	7.960	6.053	7.934	6.088	7.907	6.122	7.880	6.157	10
11	8.756	6.658	8.727	6.696	8.698	6.734	8.668	6.772	11
12	9.552	7.264	9.520	7.305	9.488	7.347	9.456	7.388	12
13	10.348	7.869	10.314	7.914	10.279	7.959	10.244	8.004	13
14	11.144	8.474	11.107	8.523	11.070	8.571	11.032	8.619	14
15	11.940	9.079	11.900	9.131	11.860	9.183	11.820	9.235	15
16	12.736	9.685	12.694	9.740	12.651	9.795	12.608	9.851	16
17	13.532	10.290	13.487	10.349	13.442	10.408	13.396	10.466	17
18	14.328	10.895	14.280	10.958	14.232	11.020	14.184	11.082	18
19	15.124	11.501	15.074	11.566	15.023	11.632	14.972	11.698	19
20	15.920	12.106	15.867	12.175	15.814	12.244	15.760	12.313	20
21	16.716	12.711	16.660	12.784	16.604	12.857	16.548	12.929	21
22	17.512	13.316	17.454	13.393	17.395	13.469	17.336	13.545	22
23	18.308	13.922	18.247	14.002	18.186	14.081	18.124	14.160	23
24	19.104	14.527	19.040	14.610	18.977	14.693	18.912	14.776	24
25	19.900	15.132	19.834	15.219	19.767	15.305	19.700	15.392	25
26	20.696	15.737	20.627	15.828	20.558	15.918	20.488	16.007	26
27	21.492	16.343	21.421	16.437	21.349	16.530	21.276	16.623	27
28	22.288	16.948	22.214	17.045	22.139	17.142	22.064	17.239	28
29	23.084	17.554	23.007	17.654	22.930	17.754	22.852	17.854	29
30	23.880	18.159	23.801	18.263	23.721	18.367	23.640	18.470	30
31	24.676	18.764	24.594	18.872	24.511	18.979	24.428	19.085	31
32	25.472	19.369	25.387	19.480	25.302	19.591	25.216	19.701	32
33	26.268	19.975	26.181	20.089	26.093	20.203	26.004	20.317	33
34	27.064	20.580	26.974	20.698	26.883	20.815	26.792	20.932	34
35	27.860	21.185	27.767	21.307	27.674	21.428	27.580	21.548	35
36	28.656	21.791	28.561	21.915	28.465	22.040	28.368	22.164	36
37	29.452	22.396	29.354	22.524	29.256	22.652	29.156	22.779	37
38	30.248	23.001	30.147	23.133	30.046	23.264	29.944	23.395	38
39	31.044	23.606	30.941	23.742	30.837	23.876	30.732	24.011	39
40	31.840	24.212	31.734	24.350	31.628	24.489	31.520	24.626	40
41	32.636	24.817	32.527	24.959	32.418	25.101	32.308	25.242	41
42	33.432	25.422	33.321	25.568	33.209	25.713	33.096	25.858	42
43	34.228	26.028	34.114	26.177	34.000	26.325	33.884	26.473	43
44	35.024	26.633	34.908	26.785	34.790	26.938	34.672	27.089	44
45	35.820	27.238	35.701	27.394	35.581	27.550	35.460	27.705	45
46	36.616	27.844	36.494	28.003	36.372	28.162	36.249	28.320	46
47	37.412	28.449	37.288	28.612	37.162	28.774	37.037	28.936	47
48	38.208	29.054	38.081	29.221	37.953	29.386	37.825	29.552	48
49	39.004	29.659	38.874	29.829	38.744	29.999	38.613	30.167	49
50	39.800	30.265	39.668	30.438	39.534	30.611	39.401	30.783	50
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	52 Degrees.								

Dist.	37 Degrees.						38 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	40.596	30.870	40.461	31.047	40.325	31.223	40.189	31.399	51
52	41.392	31.475	41.254	31.656	41.116	31.835	40.977	32.014	52
53	42.188	32.081	42.048	32.264	41.907	32.448	41.765	32.630	53
54	42.984	32.686	42.841	32.873	42.697	33.060	42.553	33.246	54
55	43.780	33.291	43.634	33.482	43.488	33.672	43.341	33.861	55
56	44.576	33.896	44.428	34.091	44.279	34.284	44.129	34.477	56
57	45.372	34.502	45.221	34.699	45.069	34.896	44.917	35.093	57
58	46.168	35.107	46.014	35.308	45.860	35.509	45.705	35.708	58
59	46.964	35.712	46.808	35.917	46.651	36.121	46.493	36.324	59
60	47.760	36.318	47.601	36.526	47.441	36.733	47.281	36.940	60
61	48.556	36.923	48.395	37.134	48.232	37.345	48.069	37.555	61
62	49.352	37.528	49.188	37.743	49.023	37.957	48 857	38.171	62
63	50.148	38.134	49.981	38.352	49.813	38.570	4[illegible].645	38.787	63
64	50.944	38.739	50.775	38.961	50.604	39.182	50.433	39.402	64
65	51.740	39.344	51.568	39.569	51.395	39.794	51.221	40.018	65
66	52.536	39.949	52.361	40.178	52.186	40.406	52.009	40.634	66
67	53.332	40.555	53.155	40.787	52.976	41.019	52.797	41.249	67
68	54.128	41.160	53.948	41.396	53.767	41.631	53.585	41.865	68
69	54.924	41.765	54.741	42.005	54.558	42.243	54.373	42.481	69
70	55.720	42.371	55.535	42.613	55.348	42.855	55.161	43.096	70
71	56.516	42.976	56.328	43.222	56.139	43.467	55.949	43.712	71
72	57.312	43.581	57.121	43.831	56.930	44.080	56.737	44.328	72
73	58.108	44.186	57.915	44.440	57.720	44.692	57.525	44.943	73
74	58.904	44.792	58.708	45.048	58.511	45.304	58.313	45.559	74
75	59.700	45.397	59.501	45.657	59.302	45.916	59.101	46.175	75
76	60.496	46.002	60.295	46.266	60.092	46.528	59.889	46.790	76
77	61.292	46.608	61.088	46.875	60.883	47.141	60.677	47.406	77
78	62.088	47.213	61.882	47.483	61.674	47.753	61.465	48.022	78
79	62.884	47.818	62.675	48.092	62.465	48.365	62.253	48.637	79
80	63.680	48.424	63.468	48.701	63.255	48.977	63.041	49.253	80
81	64.476	49.029	64.262	49.310	64.046	49.590	63.829	49.869	81
82	65.272	49.634	65.055	49.918	64.837	50.202	64.617	50.484	82
83	66.068	50.239	65.848	50.527	65.627	50.814	65.405	51.100	83
84	66.864	50.845	66.642	51.136	66.418	51.426	66.193	51.716	84
85	67.660	51.450	67.435	51.745	67.209	52.038	66.981	52.331	85
86	68.456	52.055	68.228	52.353	67.999	52.651	67.769	52.947	86
87	69.252	52.661	69.022	52.962	68.790	53.263	68.557	53.563	87
88	70.048	53.266	69.815	53.571	69.581	53.875	69.345	54.178	88
89	70.844	53.871	70.608	54.180	70.371	54.487	70.133	54.794	89
90	71.640	54.476	71.402	54.788	71.162	55.100	70.921	55.409	90
91	72.436	55.082	72.195	55.397	71.953	55.712	71.709	56.025	91
92	73.232	55.687	72.988	56.006	72.743	56.324	72.497	56.641	92
93	74.028	56.292	73.782	56.615	73.534	56.936	73.285	57.256	93
94	74.824	56.898	74.575	57.224	74.325	57.548	74.073	57.872	94
95	75.620	57.503	75.368	57.832	75.116	58.161	74.861	58.488	95
96	76.416	58.108	76.162	58.441	75.906	58.773	75.649	59.103	96
97	77.212	58.714	76.955	59.050	76.697	59.385	76.437	59.719	97
98	78.008	59.319	77.749	59.659	77.488	59.997	77.225	60.335	98
99	78.804	59.924	78.542	60.267	78.278	60.609	78.013	60.950	99
100	79.600	60.529	79 335	60.876	79.069	61.222	78.801	61.566	100
Dist.	E. W.	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	52 Degrees.								

Dist.	38 Degrees.						39 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.785	0.619	0.783	0.623	0.780	0.626	0.777	0.629	1
2	1.571	1.238	1.565	1.245	1.560	1.252	1.554	1.259	2
3	2.356	1.857	2.348	1.868	2.340	1.878	2.331	1.888	3
4	3.141	2.476	3.130	2.490	3.120	2.504	3.109	2.517	4
5	3.927	3.095	3.913	3.113	3.899	3.130	3.886	3.147	5
6	4.712	3.715	4.696	3.735	4.679	3.756	4.663	3.776	6
7	5.497	4.334	5.478	4.358	5.459	4.381	5.440	4.405	7
8	6.283	4.953	6.261	4.980	6.239	5.007	6.217	5.035	8
9	7.068	5.572	7.043	5.603	7.019	5.633	6.994	5.664	9
10	7.853	6.191	7.826	6.225	7.799	6.259	7.771	6.293	10
11	8.638	6.810	8.609	6.848	8.579	6.885	8.549	6.923	11
12	9.424	7.429	9.391	7.470	9.359	7.511	9.326	7.552	12
13	10.209	8.048	10.174	8.093	10.138	8.137	10.103	8.181	13
14	10.994	8.667	10.957	8.715	10.918	8.763	10.880	8.810	14
15	11.780	9.286	11.739	9.338	11.698	9.389	11.657	9.440	15
16	12.565	9.906	12.522	9.960	12.478	10.015	12.434	10.069	16
17	13.350	10.525	13.304	10.583	13.258	10.641	13.211	10.698	17
18	14.136	11.144	14.087	11.205	14.038	11.267	13.989	11.328	18
19	14.921	11.763	14.870	11.830	14.818	11.893	14.766	11.957	19
20	15.706	12.382	15.652	12.450	15.598	12.518	15.543	12.586	20
21	16.492	13.001	16.435	13.073	16.378	13.144	16.320	13.216	21
22	17.277	13.620	17.217	13.695	17.157	13.770	17.097	13.845	22
23	18.062	14.239	18.000	14.318	17.937	14.396	17.874	14.474	23
24	18.848	14.858	18.783	14.940	18.717	15.022	18.651	15.104	24
25	19.633	15.477	19.565	15.563	19.497	15.648	19.429	15.733	25
26	20.418	16.096	20.348	16.185	20.277	16.274	20.206	16.362	26
27	21.204	16.715	21.130	16.808	21.057	16.900	20.983	16.992	27
28	21.989	17.335	21.913	17.430	21.837	17.526	21.760	17.621	28
29	22.774	17.954	22.696	18.053	22.617	18.152	22.537	18.250	29
30	23.560	18.573	23.478	18.675	23.397	18.778	23.314	18.880	30
31	24.345	19.192	24.261	19.298	24.176	19.404	24.092	19.509	31
32	25.130	19.811	25.043	19.920	24.956	20.030	24.869	20.138	32
33	25.915	20.430	25.826	20.543	25.736	20.655	25.646	20.768	33
34	26.701	21.049	26.609	21.166	26.516	21.281	26.423	21.397	34
35	27.486	21.668	27.391	21.788	27.296	21.907	27.200	22.026	35
36	28.271	22.287	28.174	22.411	28.076	22.533	27.977	22.656	36
37	29.057	22.906	28.956	23.033	28.856	23.159	28.754	23.285	37
38	29.842	23.526	29.739	23.656	29.636	23.785	29.532	23.914	38
39	30.627	24.145	30.522	24.278	30.415	24.411	30.309	24.543	39
40	31.413	24.764	31.304	24.901	31.195	25.037	31.086	25.173	40
41	32.198	25.383	32.087	25.523	31.975	25.663	31.863	25.802	41
42	32.983	26.002	32.870	26.146	32.755	26.289	32.640	26.431	42
43	33.769	26.621	33.652	26.768	33.535	26.915	33.417	27.061	43
44	34.554	27.240	34.435	27.391	34.315	27.541	34.194	27.690	44
45	35.339	27.859	35.217	28.013	35.095	28.167	34.972	28.319	45
46	36.125	28.478	36.000	28.636	35.875	28.792	35.749	28.949	46
47	36.910	29.097	36.783	29.258	36.655	29.418	36.526	29.578	47
48	37.695	29.717	37.565	29.881	37.434	30.044	37.303	30.207	48
49	38.481	30.336	38.348	30.503	38.214	30.670	38.080	30.837	49
50	39.266	30.955	39.130	31.126	38.994	31.296	38.857	31.466	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	51 Degrees.								

Dist.	38 Degrees.						39 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	40.051	31.574	39.913	31.748	39.774	31.922	39.634	32.095	51
52	40.836	32.193	40.696	32.371	40.554	32.548	40.412	32.725	52
53	41.622	32.812	41.478	32.993	41.334	33.174	41.189	33.354	53
54	42.407	33.431	42.261	33.616	42.114	33.800	41.966	33.983	54
55	43.192	34.050	43.043	34.238	42.894	34.426	42.743	34.613	55
56	43.978	34.669	43.826	34.861	43.674	35.052	43.520	35.242	56
57	44.763	35.288	44.609	35.483	44.453	35.678	44.297	35.871	57
58	45.548	35.907	45.391	36.106	45.233	36.304	45.074	36.501	58
59	46.334	36.527	46.174	36.728	46.013	36.929	45.852	37.130	59
60	47.119	37.146	46.956	37.351	46.793	37.555	46.629	37.759	60
61	47.904	37.765	47.739	37.973	47.573	38.181	47.406	38.389	61
62	48.690	38.384	48.522	38.596	48.353	38.807	48.183	39.018	62
63	49.475	39.003	49.304	39.218	49.133	39.433	48.960	39.647	63
64	50.260	39.622	50.087	39.841	49.913	40.059	49.737	40.276	64
65	51.046	40.241	50.869	40.463	50.692	40.685	50.514	40.906	65
66	51.831	40.860	51.652	41.086	51.472	41.311	51.292	41.535	66
67	52.616	41.479	52.435	41.709	52.252	41.937	52.069	42.164	67
68	53.402	42.098	53.217	42.331	53.032	42.563	52.846	42.794	68
69	54.187	42.717	54.000	42.954	53.812	43.189	53.623	43.423	69
70	54.972	43.337	54.783	43.576	54.592	43.815	54.400	44.052	70
71	55.758	43.956	55.565	44.199	55.372	44.440	55.177	44.682	71
72	56.543	44.575	56.348	44.821	56.152	45.066	55.955	45.311	72
73	57.328	45.194	57.130	45.444	56.932	45.692	56.732	45.940	73
74	58.113	45.813	57.913	46.066	57.711	46.318	57.509	46.570	74
75	58.899	46.432	58.696	46.689	58.491	46.944	58.286	47.199	75
76	59.684	47.051	59.478	47.311	59.271	47.570	59.063	47.828	76
77	60.469	47.670	60.261	47.934	60.051	48.196	59.840	48.458	77
78	61.255	48.289	61.043	48.556	60.831	48.822	60.617	49.087	78
79	62.040	48.908	61.826	49.179	61.611	49.448	61.395	49.716	79
80	62.825	49.528	62.609	49.801	62.391	50.074	62.172	50.346	80
81	63.611	50.147	63.391	50.424	63.171	50.700	62.949	50.975	81
82	64.396	50.766	64.174	51.046	63.950	51.326	63.726	51.604	82
83	65.181	51.385	64.956	51.669	64.730	51.952	64.503	52.234	83
84	65.967	52.004	65.739	52.291	65.510	52.578	65.280	52.863	84
85	66.752	52.663	66.522	52.914	66.290	53.203	66.057	53.492	85
86	67.537	53.242	67.304	53.536	67.070	53.829	66.835	54.122	86
87	68.323	53.861	68.087	54.159	67.850	54.455	67.612	54.751	87
88	69.108	54.480	68.870	54.781	68.630	55.081	68.389	55.380	88
89	69.893	55.099	69.652	55.404	69.410	55.707	69.166	56.009	89
90	70.679	55.718	70.435	56.026	70.190	56.333	69.943	56.640	90
91	71.464	56.338	71.217	56.649	70.969	56.959	70.720	57.268	91
92	72.249	56.957	72.000	57.271	71.749	57.585	71.497	57.897	92
93	73.034	57.576	72.783	57.894	72.529	58.211	72.275	58.527	93
94	73.820	58.195	73.565	58.516	73.309	58.837	73.052	59.156	94
95	74.605	58.814	74.348	59.139	74.089	59.463	73.829	59.785	95
96	75.390	59.433	75.130	59.761	74.869	60.089	74.606	60.415	96
97	76.176	60.052	75.913	60.384	75.649	60.715	75.383	61.044	97
98	76.961	60.671	76.696	61.006	76.429	61.340	76.160	61.673	98
99	77.746	61.290	77.478	61.629	77.209	61.966	76.937	62.303	99
100	78.532	61.909	78.261	62.251	77.988	62.592	77.715	62.932	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	51 Degrees.								

Dist.	39 Degrees.						40 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.774	0.633	0.772	0.636	0.769	0.639	0.766	0.643	1
2	1.549	1.265	1.543	1.272	1.538	1.279	1.532	1.286	2
3	2.323	1.898	2.315	1.908	2.307	1.918	2.298	1.928	3
4	3.098	2.531	3.086	2.544	3.075	2.558	3.064	2.571	4
5	3.872	3.164	3.858	3.180	3.844	3.197	3.830	3.214	5
6	4.646	3.796	4.630	3.816	4.613	3.837	4.596	3.857	6
7	5.421	4.429	5.401	4.453	5.382	4.476	5.362	4.500	7
8	6.195	5.062	6.173	5.089	6.151	5.116	6.128	5.142	8
9	6.970	5.694	6.945	5.725	6.920	5.755	6.894	5.785	9
10	7.744	6.327	7.716	6.361	7.688	6.394	7.660	6.428	10
11	8.518	6.960	8.488	6.997	8.457	7.034	8.426	7.071	11
12	9.293	7.592	9.259	7.633	9.226	7.673	9.193	7.713	12
13	10.067	8.225	10.031	8.269	9.995	8.313	9.959	8.356	13
14	10.842	8.858	10.803	8.905	10.764	8.952	10.725	8.999	14
15	11.616	9.491	11.574	9.541	11.533	9.592	11.491	9.642	15
16	12.390	10.123	12.346	10.177	12.301	10.231	12.257	10.285	16
17	13.165	10.756	13.118	10.813	13.070	10.870	13.023	10.927	17
18	13.939	11.389	13.889	11.449	13.839	11.510	13.789	11.570	18
19	14.713	12.021	14.661	12.085	14.608	12.149	14.555	12.213	19
20	15.488	12.654	15.432	12.722	15.377	12.789	15.321	12.856	20
21	16.262	13.287	16.204	13.358	16.146	13.428	16.087	13.499	21
22	17.037	13.920	16.976	13.994	16.915	14.068	16.853	14.141	22
23	17.811	14.552	17.747	14.630	17.683	14.707	17.619	14.784	23
24	18.585	15.185	18.519	15.266	18.452	15.347	18.385	15.427	24
25	19.360	15.818	19.291	15.902	19.221	15.986	19.151	16.070	25
26	20.134	16.450	20.062	16.538	19.990	16.625	19.917	16.712	26
27	20.909	17.083	20.834	17.174	20.759	17.265	20.683	17.355	27
28	21.683	17.716	21.605	17.810	21.528	17.904	21.449	17.998	28
29	22.457	18.348	22.377	18.446	22.296	18.544	22.215	18.641	29
30	23.232	18.981	23.149	19.082	23.065	19.183	22.981	19.284	30
31	24.006	19.614	23.920	19.718	23.834	19.823	23.747	19.926	31
32	24.781	20.247	24.692	20.354	24.603	20.462	24.513	20.569	32
33	25.555	20.879	25.464	20.991	25.372	21.101	25.279	21.212	33
34	26.329	21.512	26.235	21.627	26.141	21.741	26.045	21.855	34
35	27.104	22.145	27.007	22.263	26.909	22.380	26.812	22.498	35
36	27.878	22.777	27.778	22.899	27.678	23.020	27.578	23.140	36
37	28.653	23.410	28.550	23.535	28.447	23.659	28.344	23.783	37
38	29.427	24.043	29.322	24.171	29.216	24.299	29.110	24.426	38
39	30.201	24.675	30.093	24.807	29.985	24.938	29.876	25.069	39
40	30.976	25.308	30.865	25.443	30.754	25.578	30.642	25.712	40
41	31.750	25.941	31.637	26.079	31.523	26.217	31.408	26.354	41
42	32.525	26.574	32.408	26.715	32.291	26.856	32.174	26.997	42
43	33.299	27.206	33.180	27.351	33.060	27.496	32.940	27.640	43
44	34.073	27.839	33.951	27.987	33.829	28.135	33.706	28.283	44
45	34.848	28.472	34.723	28.624	34.598	28.775	34.472	28.925	45
46	35.622	29.104	35.495	29.260	35.367	29.414	35.238	29.568	46
47	36.396	29.737	36.266	29.896	36.136	30.054	36.004	30.211	47
48	37.171	30.370	37.038	30.532	36.904	30.693	36.770	30.854	48
49	37.945	31.003	37.810	31.168	37.673	31.333	37.536	31.497	49
50	38.720	31.635	38.581	31.804	38.442	31.972	38.302	32.139	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	50 Degrees.								

Dist.	39 Degrees.						40 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S	E. W	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	
51	39.494	32.268	39.353	32.440	39.211	32.611	39.068	32.782	51
52	40.268	32.901	40.124	33.076	39.980	33.251	39.834	33.425	52
53	41.043	33.533	40.896	33.712	40.749	33.890	40.600	34.068	53
54	41.817	34.166	41.668	34.348	41.517	34.530	41.366	34.711	54
55	42.592	34.799	42.439	34.984	42.286	35.169	42.132	35.353	55
56	43.366	35.431	43.211	35.620	43.055	35.809	42.898	35.996	56
57	44.140	36.064	43.983	36.256	43.824	36.448	43.664	36.639	57
58	44.915	36.697	44.754	36.893	44.593	37.087	44.431	37.282	58
59	45.689	37.330	45.526	37.529	45.362	37.727	45.197	37.924	59
60	46.464	37.962	46.297	38.165	46.131	38.366	45.962	38.567	60
61	47.238	38.595	47.069	38.801	46.899	39.006	46.729	39.210	61
62	48.012	39.228	47.841	39.437	47.668	39.645	47.495	39.853	62
63	48.787	39.860	48.612	40.073	48.437	40.285	48.261	40.496	63
64	49.561	40.493	49.384	40.709	49.206	40.924	49.027	41.138	64
65	50.335	41.126	50.156	41.345	49.975	41.564	49.792	41.781	65
66	51.110	41.759	50.927	41.981	50.744	42.203	50.559	42.424	66
67	51.884	42.391	51.699	42.617	51.512	42.842	51.325	43.067	67
68	52.659	43.024	52.470	43.253	52.281	43.482	52.091	43.710	68
69	53.433	43.657	53.242	43.889	53.050	44.121	52.857	44.352	69
70	54.208	44.289	54.014	44.525	53.819	44.761	53.623	44.995	70
71	54.982	44.922	54.785	45.162	54.588	45.400	54.389	45.638	71
72	55.756	45.555	55.557	45.798	55.357	46.040	55.155	46.281	72
73	56.531	46.187	56.329	46.434	56.125	46.670	55.921	46.924	73
74	57.305	46.820	57.100	47.070	56.894	47.318	56.687	47.566	74
75	58.079	47.453	57.872	47.706	57.663	47.958	57.453	48.209	75
76	58.854	48.086	58.643	48.342	58.432	48.597	58.219	48.852	76
77	59.628	48.718	59.415	48.978	59.201	49.237	58.985	49.495	77
78	60.403	49.351	60.187	49.614	59.970	49.876	59.751	50.137	78
79	61.177	49.984	60.958	50.250	60.739	50.516	60.517	50.780	79
80	61.951	50.616	61.730	50.886	61.507	51.155	61.284	51.423	80
81	62.725	51.249	62.502	51.522	62.276	51.795	62.050	52.066	81
82	63.500	51.882	63.273	52.158	63.045	52.434	62.816	52.709	82
83	64.275	52.515	64.045	52.794	63.814	53.073	63.582	53.351	83
84	65.049	53.147	64.816	53.431	64.583	53.713	64.348	53.994	84
85	65.823	53.780	65.588	54.067	65.352	54.352	65.114	54.637	85
86	66.598	54.413	66.360	54.703	66.120	54.992	65.880	55.280	86
87	67.372	55.045	67.131	55.339	66.889	55.631	66.646	55.923	87
88	68.147	55.678	67.903	55.975	67.658	56.271	67.412	56.565	88
89	68.921	56.311	68.675	56.611	68.427	56.910	68.178	57.208	89
90	69.695	56.943	69.446	57.247	69.196	57.550	68.944	57.851	90
91	70.470	57.576	70.218	57.883	69.965	58.189	69.710	58.494	91
92	71.244	58.209	70.989	58.519	70.733	58.828	70.476	59.136	92
93	72.019	58.842	71.761	59.155	71.502	59.468	71.242	59.779	93
94	72.793	59.474	72.533	59.791	72.271	60.107	72.008	60.422	94
95	73.567	60.107	73.304	60.427	73.040	60.747	72.774	61.065	95
96	74.342	60.740	74.076	61.063	73.809	61.386	73.540	61.708	96
97	75.116	61.372	74.848	61.700	74.578	62.026	74.306	62.350	97
98	75.891	62.005	75.619	62.336	75.347	62.665	75.072	62.993	98
99	76.665	62.638	76.391	62.972	76.115	63.304	75.838	63.636	99
100	77.439	63.271	77.162	63.608	76.884	63.944	76.604	64.279	100
Dist.	E. W	N. S.	E. W.	N. S	E. W.	N. S	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	50 Degrees.								

Dist.	40 Degrees.						41 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.763	0.646	0.760	0.649	0.758	0.653	0.755	0.656	1
2	1.526	1.292	1.521	1.299	1.515	1.306	1.509	1.312	2
3	2.290	1.938	2.281	1.948	2.273	1.958	2.264	1.968	3
4	3.053	2.584	3.042	2.598	3.030	2.611	3.019	2.624	4
5	3.816	3.231	3.802	3.247	3.788	3.264	3.774	3.280	5
6	4.579	3.877	4.562	3.897	4.545	3.916	4.528	3.930	6
7	5.343	4.523	5.323	4.546	5.303	4.569	5.283	4.592	7
8	6.106	5.169	6.083	5.196	6.061	5.222	6.038	5.248	8
9	6.869	5.815	6.844	5.845	6.818	5.875	6.792	5.905	9
10	7.632	6.461	7.604	6.494	7.576	6.528	7.547	6.561	10
11	8.396	7.107	8.364	7.144	8.333	7.180	8.302	7.217	11
12	9.159	7.753	9.125	7.793	9.091	7.833	9.057	7.873	12
13	9.922	8.400	9.883	8.443	9.848	8.486	9.811	8.529	13
14	10.685	9.046	10.646	9.092	10.606	9.139	10.566	9.185	14
15	11.448	9.692	11.406	9.742	11.363	9.791	11.321	9.841	15
16	12.212	10.338	12.166	10.391	12.121	10.444	12.075	10.497	16
17	12.975	10.984	12.927	11.041	12.879	11.097	12.830	11.153	17
18	13.738	11.630	13.687	11.690	13.636	11.750	13.585	11.809	18
19	14 501	12.276	14.448	12.340	14.394	12.402	14.339	12.465	19
20	15.265	12.922	15.208	12.989	15.151	13.055	15.094	13.121	20
21	16.028	13.569	15.969	13.638	15.909	13.708	15.849	13.777	21
22	16.791	14.215	16.729	14.288	16.666	14.361	16.604	14.433	22
23	17.554	14.861	17.489	14.937	17.424	15.013	17.358	15.089	23
24	18.318	15.507	18.250	15.587	18.182	15.666	18.113	15.745	24
25	19.081	16.153	19.010	16.236	18.939	16.319	18.868	16.401	25
26	19.844	16.799	19.771	16.886	19.697	16.972	19.622	17.058	26
27	20.607	17.445	20.531	17.535	20.454	17.624	20.377	17.714	27
28	21.370	18.091	21.291	18.185	21.212	18.277	21.132	18.370	28
29	22.134	18.738	22.052	18.834	21.969	18.930	21.887	19.026	29
30	22.897	19.384	22.812	19.483	22.727	19.583	22.641	19.682	30
31	23.660	20.030	23.573	20.133	23.485	20.236	23.396	20.338	31
32	24.423	20.676	24.333	20.782	24.242	20.888	24.151	20.994	32
33	25.187	21.322	25.093	21.432	25.000	21.541	24.905	21.650	33
34	25.950	21.968	25.854	22.081	25.757	22.194	25.660	22.306	34
35	26.713	22.614	26.614	22.731	26.515	22.847	26.415	22.962	35
36	27.476	23.260	27.375	23.380	27.272	23.499	27.170	23.618	36
37	28.240	23.907	28.135	24.030	28.030	24.152	27.924	24.274	37
38	29.003	24.552	28.895	24.679	28.787	24.805	28.679	24.930	38
39	29.766	25.199	29.656	25.328	29.545	25.458	29.434	25.586	39
40	30.529	25.845	30.416	25.978	30.303	26.110	30.188	26.242	40
41	31.293	26.491	31.177	26.627	31.060	26.763	30.943	26.898	41
42	32.056	27.137	31.937	27.277	31.818	27.416	31.698	27.554	42
43	32.819	27.783	32.697	27.926	32.575	28.069	32.453	28.211	43
44	33.582	28.429	33.458	28.576	33.333	28.721	33.207	28.867	44
45	34.345	29.076	34.218	29.225	34.090	29.374	33.962	29.523	45
46	35.109	29.722	34.979	29.875	34.848	30.027	34.717	30.179	46
47	35.872	30.368	35.739	30.524	35.606	30.680	35.471	30.835	47
48	36.635	31.014	36.499	31.174	36.363	31.332	36.226	31.491	48
49	37.398	31.660	37.260	31.823	37.121	31.985	36.981	32.147	49
50	38.162	32.306	38.020	32.472	37.878	32.638	37.735	32.803	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	49 Degrees.								

Dist.	40 Degrees.						41 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W	N. S.	E. W	N. S.	E. W.	
51	38.925	32.952	38.781	33.122	38.636	33.291	38.490	33.459	51
52	39.688	33.598	39.541	33.771	39.393	33.944	39.245	34.115	52
53	40.451	34.245	40.302	34.421	40.151	34.590	40.000	34.771	53
54	41.215	34.891	41.062	35.070	40.909	35.249	40.754	35.427	54
55	41.978	35.537	41.822	35.720	41.666	35.902	41.509	36.083	55
56	42.741	36.183	42.583	36.369	42.424	36.555	42.264	36.739	56
57	43.504	36.829	43.343	37.019	43.181	37.207	43.018	37.395	57
58	44.267	37.475	44.104	37.668	43.939	37.860	43.773	38.051	58
59	45.031	38.121	44.864	38.317	44.696	38.513	44.528	38.707	59
60	45.794	38.767	45.624	38.967	45.454	39.166	45.283	39.364	60
61	46.557	39.414	46.385	39.616	46.211	39.818	46.037	40.020	61
62	47.320	40.060	47.145	40.266	46.969	40.471	46.792	40.676	62
63	48.084	40.706	47.905	40.915	47.727	41.124	47.547	41.332	63
64	48.847	41.352	48.666	41.564	48.484	41.777	48.301	41.988	64
65	49.610	41.998	49.426	42.214	49.242	42.429	49.056	42.644	65
66	50.373	42.644	50.187	42.864	49.999	43.082	49.811	43.300	66
67	51.137	43.290	50.947	43.513	50.757	43.735	50.566	43.956	67
68	51.900	43.936	51.708	44.162	51.514	44.388	51.320	44.612	68
69	52.663	44.583	52.468	44.812	52.272	45.040	52.075	45.268	69
70	53.426	45.229	53.228	45.461	53.030	45.693	52.830	45.924	70
71	54.189	45.875	53.989	46.111	53.787	46.346	53.584	46.580	71
72	54.953	46.521	54.749	46.760	54.545	46.999	54.339	47.236	72
73	55.716	47.167	55.510	47.410	55.302	47.651	55.094	47.892	73
74	56.479	47.813	56.270	48.059	56.060	48.304	55.849	48.548	74
75	57.242	48.459	57.030	48.709	56.817	48.957	56.603	49.204	75
76	58.006	49.105	57.791	49.358	57.575	49.610	57.358	49.860	76
77	58.769	49.752	58.551	50.007	58.333	50.263	58.113	50.517	77
78	59.532	50.398	59.312	50.657	59.090	50.915	58.867	51.173	78
79	60.295	51.044	60.072	51.306	59.848	51.568	59.622	51.829	79
80	61.059	51.690	60.832	51.956	60.605	52.221	60.377	52.485	80
81	61.822	52.336	61.593	52.605	61.363	52.874	61.132	53.141	81
82	62.585	52.982	62.353	53.255	62.120	53.526	61.886	53.797	82
83	63.348	53.628	63.114	53.904	62.878	54.179	62.641	54.453	83
84	64.111	54.274	63.874	54.554	63.635	54.832	63.396	55.109	84
85	64.875	54.921	64.635	55.203	64.393	55.485	64.150	55.765	85
86	65.638	55.567	65.395	55.853	65.151	56.137	64.905	56.421	86
87	66.401	56.213	66.155	56.502	65.908	56.790	65.660	57.077	87
88	67.164	56.859	66.916	57.151	66.666	57.443	66.414	57.733	88
89	67.928	57.505	67.676	57.801	67.423	58.096	67.169	58.389	89
90	68.691	58.151	68.437	58.450	68.181	58.748	67.924	59.045	90
91	69.454	58.797	69.197	59.100	68.938	59.401	68.679	59.701	91
92	70.217	59.443	69.957	59.749	69.696	60.054	69.433	60.357	92
93	70.981	60.089	70.718	60.399	70.454	60.707	70.188	61.013	93
94	71.744	60.736	71.478	61.048	71.211	61.359	70.943	61.670	94
95	72.507	61.382	72.239	61.698	71.969	62.012	71.697	62.326	95
96	73.270	62.028	72.999	62.347	72.726	62.665	72.452	62.982	96
97	74.034	62.674	73.759	62.996	73.484	63.318	73.207	63.638	97
98	74.797	63.320	74.520	63.646	74.241	63.970	73.962	64.294	98
99	75.560	63.966	75.280	64.295	74.999	64.623	74.716	64.950	99
100	76.323	64.612	76.041	64.945	75.756	65.276	75.471	65.606	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	49 Degrees.								

L 2

Dist.	41 Degrees.						42 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.752	0.659	0.749	0.663	0.746	0.666	0.743	0.669	1
2	1.504	1.319	1.498	1.325	1.492	1.332	1.486	1.338	2
3	2.256	1.978	2.247	1.988	2.238	1.998	2.229	2.007	3
4	3.007	2.637	2.996	2.650	2.984	2.664	2.973	2.677	4
5	3.759	3.297	3.745	3.313	3.730	3.329	3.716	3.346	5
6	4.511	3.956	4.494	3.976	4.476	3.995	4.459	4.015	6
7	5.263	4.615	5.243	4.638	5.222	4.661	5.202	4.684	7
8	6.015	5.275	5.992	5.301	5.968	5.327	5.945	5.353	8
9	6.767	5.934	6.741	5.964	6.716	5.993	6.688	6.022	9
10	7.518	6.593	7.490	6.626	7.461	6.659	7.431	6.691	10
11	8.270	7.253	8.239	7.289	8.207	7.325	8.176	7.360	11
12	9.022	7.912	8.988	7.951	8.953	7.991	8.918	8.030	12
13	9.774	8.571	9.736	8.614	9.699	8.656	9.661	8.699	13
14	10.526	9.231	10.483	9.277	10.445	9.322	10.404	9.368	14
15	11.278	9.890	11.234	9.939	11.191	9.988	11.147	10.037	15
16	12.029	10.550	11.983	10.602	11.937	10.654	11.890	10.706	16
17	12.781	11.209	12.732	11.265	12.683	11.320	12.633	11.375	17
18	13.533	11.868	13.481	11.927	13.429	11.986	13.377	12.044	18
19	14.285	12.528	14.230	12.590	14.175	12.652	14.120	12.713	19
20	15.037	13.187	14.979	13.252	14.921	13.318	14.863	13.383	20
21	15.789	13.846	15.728	13.915	15.667	13.984	15.606	14.052	21
22	16.540	14.506	16.477	14.578	16.413	14.649	16.349	14.721	22
23	17.292	15.165	17.226	15.240	17.159	15.315	17.092	15.390	23
24	18.044	15.824	17.975	15.903	17.905	15.981	17.835	16.059	24
25	18.796	16.484	18.724	16.566	18.651	16.647	18.579	16.728	25
26	19.548	17.143	19.473	17.228	19.397	17.313	19.322	17.397	26
27	20.300	17.802	20.222	17.891	20.144	17.979	20.065	18.067	27
28	21.052	18.462	20.971	18.553	20.890	18.645	20.808	18.736	28
29	21.803	19.121	21.720	19.216	21.636	19.311	21.551	19.405	29
30	22.555	19.780	22.469	19.879	22.382	19.976	22.294	20.074	30
31	23.307	20.440	23.218	20.541	23.128	20.642	23.037	20.743	31
32	24.059	21.099	23.967	21.204	23.874	21.308	23.781	21.412	32
33	24.811	21.758	24.716	21.866	24.620	21.974	24.524	22.081	33
34	25.563	22.418	25.464	22.529	25.366	22.640	25.267	22.750	34
35	26.314	23.077	26.213	23.192	26.112	23.306	26.010	23.420	35
36	27.066	23.736	26.962	23.854	26.858	23.972	26.753	24.089	36
37	27.818	24.396	27.711	24.517	27.604	24.638	27.496	24.758	37
38	28.570	25.055	28.460	25.180	28.350	25.304	28.240	25.427	38
39	29.322	25.714	29.209	25.842	29.096	25.969	28.983	26.096	39
40	30.074	26.374	29.958	26.505	29.842	26.635	29.726	26.765	40
41	30.825	27.033	30.707	27.167	30.588	27.301	30.469	27.434	41
42	31.577	27.693	31.456	27.830	31.334	27.967	31.212	28.103	42
43	32.329	28.352	32.205	28.493	32.080	28.633	31.955	28.773	43
44	33.081	29.011	32.954	29.155	32.827	29.299	32.698	29.442	44
45	33.833	29.671	33.703	29.818	33.573	29.965	33.442	30.111	45
46	34.585	30.330	34.452	30.481	34.319	30.631	34.185	30.780	46
47	35.336	30.989	35.201	31.143	35.065	31.296	34.928	31.449	47
48	36.088	31.649	35.950	31.806	35.811	31.962	35.671	32.118	48
49	36.840	32.308	36.699	32.468	36.557	32.628	36.414	32.787	49
50	37.592	32.967	37.448	33.131	37.303	33.294	37.157	33.456	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	48 Degrees.								

Dist.	41 Degrees.						42 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	38.344	33.627	38.197	33.794	38.049	33.960	37.900	34.126	51
52	39.096	34.286	38.946	34.456	38.795	34.626	38.644	34.795	52
53	39.848	34.945	39.695	35.119	39.541	35.292	39.387	35.464	53
54	40.599	35.605	40.444	35.781	40.287	35.958	40.130	36.133	54
55	41.351	36.264	41.193	36.444	41.033	36.624	40.873	36.802	55
56	42.103	36.923	41.942	37.107	41.779	37.289	41.616	37.471	56
57	42.855	37.583	42.690	37.769	42.525	37.955	42.359	38.140	57
58	43.607	38.242	43.439	38.432	43.271	38.621	43.102	38.810	58
59	44.359	38.901	44.188	39.095	44.017	39.287	43.846	39.479	59
60	45.110	39.561	44.937	39.757	44.763	39.953	44.589	40.148	60
61	45.862	40.220	45.686	40.420	45.509	40.619	45.332	40.817	61
62	46.614	40.879	46.435	41.082	46.256	41.285	46.075	41.486	62
63	47.366	41.539	47.184	41.745	47.002	41.951	46.818	42.155	63
64	48.118	42.198	47.933	42.408	47.748	42.616	47.561	42.824	64
65	48.870	42.857	48.682	43.070	48.494	43.282	48.304	43.493	65
66	49.621	43.517	49.431	43.733	49.240	43.948	49.048	44.163	66
67	50.373	44.176	50.180	44.395	49.986	44.614	49.791	44.832	67
68	51.125	44.836	50.929	45.058	50.732	45.280	50.534	45.501	68
69	51.877	45.495	51.678	45.721	51.478	45.946	51.277	46.170	69
70	52.629	46.154	52.427	46.383	52.224	46.612	52.020	46.839	70
71	53.381	46.814	53.176	47.046	52.970	47.278	52.763	47.508	71
72	54.132	47.473	53.925	47.709	53.716	47.944	53.506	48.177	72
73	54.884	48.132	54.674	48.371	54.462	48.609	54.250	48.846	73
74	55.636	48.792	55.423	49.034	55.208	49.275	54.993	49.516	74
75	56.388	49.451	56.172	49.696	55.954	49.941	55.736	50.185	75
76	57.140	50.110	56.921	50.359	56.700	50.607	56.479	50.854	76
77	57.892	50.770	57.670	51.022	57.446	51.273	57.222	51.523	77
78	58.644	51.429	58.419	51.684	58.192	51.939	57.965	52.192	78
79	59.395	52.088	59.168	52.347	58.939	52.605	58.708	52.861	79
80	60.147	52.748	59.916	53.010	59.685	53.271	59.452	53.530	80
81	60.899	53.407	60.665	53.672	60.431	53.936	60.195	54.200	81
82	61.651	54.066	61.414	54.335	61.177	54.602	60.938	54.869	82
83	62.403	54.726	62.163	54.997	61.923	55.268	61.681	55.538	83
84	63.155	55.385	62.912	55.660	62.669	55.934	62.424	56.207	84
85	63.906	56.044	63.661	56.323	63.415	56.600	63.167	56.876	85
86	64.658	56.704	64.410	56.985	64.161	57.266	63.910	57.545	86
87	65.410	57.363	65.159	57.648	64.907	57.932	64.654	58.214	87
88	66.162	58.022	65.908	58.311	65.653	58.598	65.397	58.883	88
89	66.914	58.682	66.657	58.973	66.399	59.263	66.140	59.553	89
90	67.666	59.341	67.406	59.636	67.145	59.929	66.883	60.222	90
91	68.417	60.000	68.155	60.298	67.891	60.595	67.626	60.891	91
92	69.169	60.660	68.904	60.961	68.637	61.261	68.369	61.560	92
93	69.921	61.319	69.653	61.624	69.383	61.927	69.112	62.229	93
94	70.673	61.979	70.402	62.286	70.129	62.593	69.856	62.898	94
95	71.425	62.638	71.151	62.949	70.875	63.259	70.599	63.567	95
96	72.177	63.297	71.900	63.612	71.621	63.925	71.342	64.236	96
97	72.928	63.957	72.649	64.274	72.368	64.591	72.085	64.906	97
98	73.680	64.616	73.398	64.937	73.114	65.256	72.828	65.575	98
99	74.432	65.275	74.147	65.599	73.860	65.922	73.571	66.244	99
100	75.184	65.935	74.896	66.262	74.606	66.588	74.314	66.913	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	48 Degrees.								

Dist.	42 Degrees.						43 Degrees.		Dist.
	15 Min.		30 Min		45 Min		0 Min.		
	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.740	0.672	0.737	0.670	0.734	0.679	0.731	0.682	1
2	1.480	1.345	1.475	1.351	1.469	1.358	1.463	1.364	2
3	2.221	2.017	2.212	2.027	2.203	2.036	2.194	2.046	3
4	2.961	2.689	2.949	2.702	2.937	2.715	2.925	2.728	4
5	3.701	3.362	3.686	3.378	3.672	3.394	3.657	3.410	5
6	4.441	4.034	4.424	4.054	4.406	4.073	4.388	4.092	6
7	5.182	4.707	5.161	4.729	5.140	4.752	5.119	4.774	7
8	5.922	5.379	5.898	5.405	5.875	5.430	5.851	5.456	8
9	6.662	6.051	6.635	6.080	6.609	6.109	6.582	6.138	9
10	7.402	6.724	7.373	6.756	7.343	6.788	7.314	6.820	10
11	8.142	7.396	8.110	7.431	8.078	7.467	8.045	7.502	11
12	8.883	8.068	8.847	8.107	8.812	8.146	8.776	8.184	12
13	9.623	8.741	9.585	8.783	9.546	8.824	9.508	8.866	13
14	10.363	9.413	10.322	9.458	10.281	9.503	10.239	9.548	14
15	11.103	10.086	11.059	10.134	11.015	10.182	10.970	10.230	15
16	11.843	10.758	11.796	10.809	11.749	10.861	11.702	10.912	16
17	12.584	11.430	12.534	11.485	12.483	11.540	12.433	11.594	17
18	13.324	12.103	13.271	12.161	13.218	12.218	13.164	12.276	18
19	14.064	12.775	14.008	12.836	13.952	12.897	13.896	12.958	19
20	14.804	13.447	14.746	13.512	14.686	13.576	14.627	13.640	20
21	15.545	14.120	15.483	14.187	15.421	14.255	15.358	14.322	21
22	16.285	14.792	16.220	14.863	16.155	14.934	16.090	15.004	22
23	17.025	15.464	16.957	15.539	16.889	15.612	16.821	15.686	23
24	17.765	16.137	17.695	16.214	17.624	16.291	17.552	16.368	24
25	18.505	16.809	18.432	16.890	18.358	16.970	18.284	17.050	25
26	19.246	17.482	19.169	17.565	19.092	17.649	19.015	17.732	26
27	19.986	18.154	19.906	18.241	19.827	18.328	19.747	18.414	27
28	20.726	18.826	20.644	18.917	20.561	19.006	20.478	19.096	28
29	21.466	19.499	21.381	19.592	21.295	19.685	21.209	19.778	29
30	22.206	20.171	22.118	20.268	22.030	20.364	21.941	20.460	30
31	22.947	20.843	22.856	20.943	22.764	21.043	22.672	21.142	31
32	23.687	21.516	23.593	21.619	23.498	21.722	23.403	21.824	32
33	24.427	22.188	24.330	22.294	24.233	22.400	24.135	22.506	33
34	25.167	22.860	25.067	22.970	24.967	23.079	24.866	23.188	34
35	25.908	23.533	25.805	23.646	25.701	23.758	25.597	23.870	35
36	26.648	24.205	26.542	24.321	26.436	24.437	26.329	24.552	36
37	27.388	24.878	27.279	24.997	27.170	25.116	27.060	25.234	37
38	28.128	25.550	28.017	25.672	27.904	25.794	27.791	25.916	38
39	28.869	26.222	28.754	26.348	28.639	26.473	28.523	26.598	39
40	29.609	26.895	29.491	27.024	29.373	27.152	29.254	27.280	40
41	30.349	27.567	30.228	27.699	30.107	27.831	29.986	27.962	41
42	31.089	28.239	30.966	28.375	30.842	28.510	30.717	28.644	42
43	31.829	28.912	31.703	29.050	31.576	29.188	31.448	29.326	43
44	32.570	29.584	32.440	29.726	32.310	29.867	32.180	30.008	44
45	33.310	30.257	33.177	30.401	33.044	30.546	32.911	30.690	45
46	34.050	30.929	33.915	31.077	33.779	31.225	33.642	31.372	46
47	34.790	31.601	34.652	31.753	34.513	31.904	34.374	32.054	47
48	35.530	32.274	35.389	32.428	35.247	32.582	35.105	32.736	48
49	36.271	32.946	36.127	33.104	35.982	33.261	35.836	33.418	49
50	37.011	33.618	36.864	33.779	36.716	33.940	36.568	34.100	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	47 Degrees.								

Diſt.	42 Degrees.						43 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	37.751	34.291	37.601	34.455	37.450	34.619	37.299	34.782	51
52	38.491	34.963	38.338	35.131	38.185	35.298	38.030	35.464	52
53	39.232	35.635	39.076	35.806	38.919	35.976	38.762	36.146	53
54	39.972	36.308	39.813	36.482	39.653	36.655	39.493	36.828	54
55	40.712	36.980	40.550	37.157	40.388	37.334	40.224	37.510	55
56	41.452	37.653	41.288	37.833	41.122	38.013	40,956	38.192	56
57	42.192	38.325	42.025	38.509	41.856	38.692	41.687	38.874	57
58	42.933	38.997	42.762	39.184	42.591	39.370	42.419	39.556	58
59	43.673	39.670	43.499	39.860	43.325	40.049	43.150	40.238	59
60	44.413	40.342	44.237	40.535	44.059	40.728	43.881	40.920	60
61	45.153	41.014	44.974	41.211	44.794	41.407	44.613	41.602	61
62	45.894	41.687	45.711	41.887	45.528	42.086	45.344	42.284	62
63	46.634	42.359	46.448	42.562	46.262	42.764	46.075	42.966	63
64	47.374	43.031	47.186	43.238	46.997	43.443	46.807	43.648	64
65	48.114	43.704	47.923	43.913	47.731	44.122	47.538	44.339	65
66	48.854	44.376	48.660	44.589	48.465	44.801	48.269	45.012	66
67	49.595	45.049	49.397	45.265	49.200	45.480	49.001	45.694	67
68	50.335	45.721	50.135	45.940	49.934	46.158	49.732	46.376	68
69	51.075	46.393	50.872	46.616	50.668	46.837	50.463	47.058	69
70	51.815	47.066	51.609	47.291	51.403	47.516	51.195	47.740	70
71	52.555	47.738	52.347	47.967	52.137	48.195	51.926	48.422	71
72	53.296	48.410	53.084	48.642	52.871	48.874	52.657	49.104	72
73	54.036	49.083	53.821	49.318	53.606	49.552	53.389	49.786	73
74	54.776	49.755	54.558	49.994	54.340	50.231	54.120	50.468	74
75	55.516	50.428	55.296	50.669	55.074	50.910	54.852	51.150	75
76	56.257	51.100	56.033	51.345	55.808	51.589	55.583	51.832	76
77	56.997	51.772	56.770	52.020	56.543	52.268	56.314	52.514	77
78	57.737	52.445	57.508	52.696	57.277	52.946	57.046	53.196	78
79	58.477	53.117	58.245	53.372	58.011	53.625	57.777	53.878	79
80	59.217	53.789	58.982	54.047	58.746	54.304	58.508	54.560	80
81	59.958	54.462	59.719	54.723	59.480	54.983	59.240	55.242	81
82	60.698	55.134	60.457	55.398	60.214	55.662	59.971	55.924	82
83	61.438	55.806	61.194	56.074	60.949	56.340	60.702	56.606	83
84	62.178	56.479	61.931	56.750	61.683	57.019	61.434	57.288	84
85	62.919	57.151	62.669	57.425	62.417	57.698	62.165	57.970	85
86	63.659	57.824	63.406	58.101	63.152	58.377	62.896	58.652	86
87	64.399	58.496	64.143	58.776	63.886	59.056	63.628	59.334	87
88	65.139	59.168	64.880	59.452	64.620	59.734	64.359	60.016	88
89	65.879	59.841	65.618	60.128	65.355	60.413	65.091	60.698	89
90	66.620	60.513	66.355	60.803	66.089	61.092	65.822	61.380	90
91	67.360	61.185	67.092	61.479	66.823	61.771	66.553	62.062	91
92	68.100	61.858	67.829	62.154	67.558	62.450	67.285	62.744	92
93	68.840	62.530	68.567	62.830	68.292	63.128	68.016	63.426	93
94	69.580	63.202	69.304	63.505	69.026	63.807	68.747	64.108	94
95	70.321	63.875	70.041	64.181	69.761	64.486	69.479	64.790	95
96	71.061	64.547	70.779	64.857	70.495	65.165	70.210	65.472	96
97	71.801	65.220	71.516	65.532	71.229	65.844	70.941	66.154	97
98	72.541	65.892	72.253	66.208	71.964	66.522	71.673	66.836	98
99	73.282	66.564	72.990	66.883	72.698	67.201	72.404	67.518	99
100	74.022	67.237	73.728	67.559	73.432	67.880	73.135	68.200	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	47 Degrees.								

Dist.	43 Degrees.						44 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.728	0.685	0.725	0.688	0.722	0.692	0.719	0.695	1
2	1.457	1.370	1.451	1.377	1.445	1.383	1.439	1.389	2
3	2.185	2.056	2.176	2.065	2.167	2.075	2.158	2.084	3
4	2.913	2.741	2.901	2.753	2.889	2.766	2.877	2.779	4
5	3.642	3.426	3.627	3.442	3.612	3.458	3.597	3.473	5
6	4.370	4.111	4.352	4.130	4.334	4.149	4.316	4.168	6
7	5.099	4.796	5.078	4.818	5.057	4.841	5.035	4.863	7
8	5.827	5.481	5.803	5.507	5.779	5.532	5.755	5.557	8
9	6.555	6.167	6.528	6.195	6.501	6.224	6.474	6.252	9
10	7.284	6.852	7.254	6.883	7.224	6.915	7.193	6.947	10
11	8.012	7.537	7.979	7.572	7.946	7.607	7.913	7.641	11
12	8.740	8.222	8.704	8.260	8.668	8.298	8.632	8.336	12
13	9.469	8.907	9.430	8.949	9.391	8.990	9.351	9.031	13
14	10.197	9.593	10.155	9.637	10.113	9.681	10.071	9.725	14
15	10.926	10.278	10.881	10.325	10.835	10.373	10.790	10.420	15
16	11.654	10.963	11.606	11.014	11.558	11.064	11.509	11.115	16
17	12.382	11.648	12.331	11.702	12.280	11.756	12.229	11.809	17
18	13.111	12.333	13.057	12.390	13.003	12.447	12.948	12.504	18
19	13.839	13.018	13.782	13.079	13.725	13.139	13.667	13.199	19
20	14.567	13.704	14.507	13.767	14.447	13.830	14.387	13.893	20
21	15.296	14.389	15.233	14.455	15.170	14.522	15.106	14.588	21
22	16.024	15.074	15.958	15.144	15.892	15.213	15.825	15.282	22
23	16.752	15.759	16.684	15.832	16.614	15.905	16.545	15.977	23
24	17.481	16.444	17.409	16.521	17.337	16.596	17.264	16.672	24
25	18.209	17.130	18.134	17.209	18.059	17.288	17.984	17.366	25
26	18.938	17.815	18.860	17.897	18.781	17.979	18.703	18.061	26
27	19.666	18.500	19.585	18.586	19.504	18.671	19.422	18.756	27
28	20.394	19.185	20.310	19.274	20.226	19.362	20.142	19.450	28
29	21.123	19.870	21.036	19.962	20.949	20.054	20.861	20.145	29
30	21.851	20.555	21.761	20.651	21.671	20.745	21.580	20.840	30
31	22.579	21.241	22.487	21.339	22.393	21.437	22.300	21.534	31
32	23.308	21.926	23.212	22.027	23.116	22.128	23.019	22.229	32
33	24.036	22.611	23.937	22.716	23.838	22.820	23.738	22.924	33
34	24.765	23.296	24.663	23.404	24.560	23.511	24.458	23.618	34
35	25.493	23.981	25.388	24.092	25.283	24.203	25.177	24.313	35
36	26.221	24.667	26.113	24.781	26.005	24.894	25.896	25.008	36
37	26.950	25.352	26.839	25.469	26.727	25.586	26.616	25.702	37
38	27.678	26.037	27.564	26.157	27.450	26.277	27.335	26.397	38
39	28.406	26.722	28.290	26.846	28.172	26.969	28.054	27.092	39
40	29.135	27.407	29.015	27.534	28.895	27.661	28.774	27.786	40
41	29.863	28.093	29.740	28.223	29.617	28.352	29.493	28.481	41
42	30.591	28.778	30.466	28.911	30.339	29.044	30.212	29.176	42
43	31.320	29.463	31.191	29.599	31.062	29.735	30.932	29.870	43
44	32.048	30.148	31.916	30.288	31.784	30.427	31.651	30.565	44
45	32.777	30.833	32.642	30.976	32.506	31.118	32.370	31.260	45
46	33.505	31.518	33.367	31.664	33.229	31.810	33.090	31.954	46
47	34.233	32.204	34.093	32.353	33.951	32.501	33.809	32.649	47
48	34.962	32.889	34.818	33.041	34.673	33.193	34.528	33.344	48
49	35.690	33.574	35.543	33.729	35.396	33.884	35.248	34.038	49
50	36.418	34.259	36.269	34.418	36.118	34.576	35.967	34.733	50
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	46 Degrees.								

Dist.	43 Degrees						44 Degrees.		Dist.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	37.147	34.944	36.994	35.106	36.841	35.267	36.686	35.428	51
52	37.875	35.630	37.719	35.794	37.563	35.959	37.406	36.122	52
53	38.604	36.315	38.445	36.483	38.285	36.650	38.125	36.817	53
54	39.332	37.000	39.170	37.171	39.008	37.342	38.844	37.512	54
55	40.060	37.685	39.896	37.860	39.730	38.033	39.564	38.206	55
56	40.789	38.370	40.621	38.548	40.452	38.725	40.283	38.901	56
57	41.517	39.055	41.346	39.236	41.175	39.416	41.002	39.596	57
58	42.245	39.741	42.072	39.925	41.897	40.108	41.722	40.290	58
59	42.974	40.426	42.797	40.613	42.619	40.799	42.441	40.985	59
60	43.702	41.111	43.522	41.301	43.342	41.491	43.160	41.679	60
61	44.431	41.796	44.248	41.990	44.064	42.182	43.880	42.374	61
62	45.159	42.481	44.973	42.678	44.787	42.874	44.599	43.069	62
63	45.887	43.167	45.699	43.366	45.509	43.565	45.318	43.763	63
64	46.616	43.852	46.424	44.055	46.231	44.257	46.038	44.458	64
65	47.344	44.537	47.149	44.743	46.954	44.948	46.757	45.153	65
66	48.072	45.222	47.875	45.431	47.676	45.640	47.476	45.847	66
67	48.801	45.907	48.600	46.120	48.398	46.331	48.196	46.542	67
68	49.529	46.592	49.325	46.808	49.121	47.023	48.915	47.237	68
69	50.258	47.278	50.051	47.496	49.843	47.714	49.634	47.931	69
70	50.986	47.963	50.776	48.185	50.565	48.406	50.354	48.626	70
71	51.714	48.648	51.502	48.873	51.288	49.097	51.073	49.321	71
72	52.443	49.333	52.227	49.562	52.010	49.789	51.792	50.015	72
73	53.171	50.018	52.952	50.250	52.733	50.480	52.512	50.710	73
74	53.899	50.704	53.678	50.938	53.455	51.172	53.231	51.405	74
75	54.628	51.389	54.403	51.627	54.177	51.863	53.950	52.099	75
76	55.356	52.074	55.128	52.315	54.900	52.555	54.670	52.794	76
77	56.084	52.759	55.854	53.003	55.622	53.247	55.389	53.489	77
78	56.813	53.444	56.579	53.692	56.344	53.938	56.109	54.183	78
79	57.541	54.129	57.305	54.380	57.067	54.630	56.828	54.878	79
80	58.270	54.815	58.030	55.068	57.789	55.321	57.547	55.573	80
81	58.998	55.500	58.755	55.757	58.511	56.013	58.267	56.267	81
82	59.726	56.185	59.481	56.445	59.234	56.704	58.986	56.962	82
83	60.455	56.870	60.206	57.133	59.956	57.396	59.705	57.657	83
84	61.183	57.555	60.931	57.822	60.679	58.087	60.425	58.351	84
85	61.911	58.241	61.657	58.510	61.401	58.779	61.144	59.046	85
86	62.640	58.926	62.382	59.198	62.123	59.470	61.863	59.741	86
87	63.368	59.611	63.108	59.887	62.846	60.162	62.583	60.435	87
88	64.097	60.296	63.833	60.575	63.568	60.853	63.302	61.130	88
89	64.825	60.981	64.558	61.264	64.290	61.545	64.021	61.825	89
90	65.553	61.666	65.284	61.952	65.013	62.236	64.741	62.519	90
91	66.282	62.352	66.009	62.640	65.735	62.928	65.460	63.214	91
92	67.010	63.037	56.734	63.329	56.457	63.619	66.179	63.909	92
93	67.738	63.722	67.460	64.017	67.180	64.311	66.899	64.603	93
94	68.467	64.407	68.185	64.705	67.902	65.002	67.618	65.298	94
95	69.195	65.092	68.911	65.394	68.625	65.694	68.337	65.993	95
96	69.924	65.778	69.636	66.082	69.347	66.385	69.057	66.687	96
97	70.652	66.463	70.361	66.770	70.069	67.077	69.776	67.382	97
98	71.380	67.148	71.087	67.459	70.792	67.768	70.495	68.076	98
99	72.109	67.833	71.812	68.147	71.514	68.460	71.215	68.771	99
100	72.837	68.518	72.537	68.835	72.236	69.151	71.934	69.466	100
Dist.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	46 Degrees.								

Dist.	44 Degrees.						45 Degrees.		Dist.
	15 Min.		30 Min		45 Min.		0 Min.		
	N. S.	E. W	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
1	0.716	0.698	0.713	0.701	0.710	0.704	0.707	0.707	1
2	1.433	1.396	1.426	1.402	1.420	1.408	1.414	1.414	2
3	2.149	2.093	2.140	2.103	2.131	2.112	2.121	2.121	3
4	2.865	2.791	2.853	2.804	2.841	2.816	2.828	2.828	4
5	3.582	3.489	3.566	3.505	3.551	3.520	3.536	3.536	5
6	4.298	4.187	4.279	4.205	4.261	4.224	4.243	4.243	6
7	5.014	4.885	4.993	4.906	4.971	4.928	4.950	4.950	7
8	5.730	5.582	5.706	5.607	5.681	5.632	5.657	5.657	8
9	6.447	6.280	6.419	6.308	6.392	6.336	6.364	6.364	9
10	7.163	6.978	7.132	7.009	7.102	7.040	7.071	7.071	10
11	7.879	7.676	7.846	7.710	7.812	7.744	7.778	7.778	11
12	8.596	8.373	8.559	8.411	8.522	8.448	8.485	8.485	12
13	9.312	9.071	9.272	9.112	9.232	9.152	9.192	9.192	13
14	10.028	9.769	9.985	9.813	9.943	9.856	9.899	9.899	14
15	10.745	10.467	10.699	10.514	10.653	10.560	10.607	10.607	15
16	11.461	11.165	11.412	11.215	11.363	11.264	11.314	11.314	16
17	12.177	11.862	12.125	11.915	12.073	11.968	12.021	12.021	17
18	12.893	12.560	12.838	12.616	12.783	12.672	12.728	12.728	18
19	13.610	13.258	13.552	13.317	13.494	13.376	13.435	13.435	19
20	14.326	13.956	14.265	14.018	14.204	14.080	14.142	14.142	20
21	15.042	14.654	14.978	14.719	14.914	14.784	14.849	14.849	21
22	15.759	15.351	15.691	15.420	15.624	15.488	15.556	15.556	22
23	16.475	16.049	16.405	16.121	16.334	16.192	16.263	16.263	23
24	17.191	16.747	17.118	16.822	17.044	16.896	16.971	16.971	24
25	17.908	17.448	17.831	17.523	17.755	17.600	17.678	17.678	25
26	18.624	18.143	18.544	18.224	18.465	18.304	18.385	18.385	26
27	19.340	18.840	19.258	18.925	19.175	19.008	19.092	19.092	27
28	20.056	19.538	19.971	19.625	19.885	19.712	19.799	19.799	28
29	20.773	20.236	20.684	20.326	20.595	20.416	20.506	20.506	29
30	21.489	20.934	21.397	21.027	21.306	21.120	21.213	21.213	30
31	22.205	21.631	22.111	21.728	22.010	21.824	21.920	21.920	31
32	22.922	22.329	22.824	22.429	22.726	22.528	22.627	22.627	32
33	23.638	23.027	23.537	23.130	23.436	23.232	23.335	23.335	33
34	24.354	23.725	24.250	23.831	24.146	23.937	24.042	24.042	34
35	25.071	24.423	24.964	24.532	24.856	24.641	24.749	24.749	35
36	25.787	25.120	25.677	25.233	25.567	25.345	25.456	25.456	36
37	26.503	25.818	26.390	25.934	26.277	26.049	26.163	26.163	37
38	27.219	26.516	27.103	26.635	26.987	26.753	26.870	26.870	38
39	27.936	27.214	27.817	27.335	27.697	27.457	27.577	27.577	39
40	28.652	27.912	28.530	28.036	28.407	28.161	28.284	28.284	40
41	29.368	28.609	29.243	28.737	29.118	28.865	28.991	28.991	41
42	30.085	29.307	29.957	29.438	29.828	29.569	29.698	29.698	42
43	30.801	30.005	30.670	30.139	30.538	30.273	30.406	30.406	43
44	31.517	30.703	31.383	30.840	31.248	30.977	31.113	31.113	44
45	32.234	31.401	32.096	31.541	31.958	31.681	31.820	31.820	45
46	32.950	32.098	32.809	32.242	32.669	32.385	32.527	32.527	46
47	33.666	32.796	33.523	32.943	33.379	33.089	33.234	33.234	47
48	34.382	33.494	34.236	33.644	34.089	33.793	33.941	33.941	48
49	35.099	34.192	34.949	34.345	34.799	34.497	34.648	34.648	49
50	35.815	34.889	35.662	35.046	35.509	35.201	35.355	35.355	50
Dist.	E. W.	N. S	E. W.	N. S.	E. W	N. S.	E. W.	N. S.	Dist.
	45 Min.		30 Min.		15 Min.		0 Min.		
	45 Degrees.								

Diſt.	44 Degrees.						45 Degrees.		Diſt.
	15 Min.		30 Min.		45 Min.		0 Min.		
	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	
51	36.531	35.587	36.376	35.746	36.219	35.905	36.062	36.062	51
52	37.248	36.285	37.089	36.447	36.930	36.609	36.770	36.770	52
53	37.964	36.983	37.802	37.148	37.640	37.313	37.477	37.477	53
54	38.680	37.681	38.515	37.849	38.350	38.017	38.184	38.184	54
55	39.397	38.378	39.229	38.550	39.060	38.721	38.891	38.891	55
56	40.113	39.076	39.942	39.251	39.770	39.425	39.598	39.598	56
57	40.829	39.774	40.655	39.952	40.481	40.129	40.305	40.305	57
58	41.546	40.472	41.368	40.653	41.191	40.833	41.012	41.012	58
59	42.262	41.170	42.082	41.354	41.901	41.537	41.719	41.719	59
60	42.978	41.867	42.795	42.055	42.611	42.241	42.426	42.426	60
61	43.694	42.565	43.508	42.756	43.321	42.945	43.134	43.134	61
62	44.411	43.263	44.221	43.456	44.031	43.649	43.841	43.841	62
63	45.127	43.961	44.935	44.157	44.742	44.353	44.548	44.548	63
64	45.843	44.659	45.648	44.858	45.452	45.057	45.255	45.255	64
65	46.560	45.356	46.361	45.559	46.162	45.761	45.962	45.962	65
66	47.276	46.054	47.074	46.260	46.872	46.465	46.669	46.669	66
67	47.992	46.752	47.788	46.961	47.582	47.169	47.376	47.376	67
68	48.709	47.450	48.501	47.662	48.293	47.873	48.083	48.083	68
69	49.425	48.148	49.214	48.363	49.003	48.577	48.790	48.790	69
70	50.141	48.845	49.927	49.064	49.713	49.281	49.497	49.497	70
71	50.857	49.543	50.641	49.765	50.423	49.985	50.205	50.205	71
72	51.574	50.241	51.354	50.465	51.133	50.689	50.912	50.912	72
73	52.290	50.939	52.067	51.166	51.844	51.393	51.619	51.619	73
74	53.006	51.636	52.780	51.867	52.554	52.097	52.326	52.326	74
75	53.723	52.334	53.494	52.568	53.264	52.801	53.033	53.033	75
76	54.439	53.032	54.207	53.269	53.974	53.505	53.740	53.740	76
77	55.155	53.730	54.920	53.970	54.684	54.209	54.447	54.447	77
78	55.872	54.428	55.633	54.671	55.394	54.913	55.154	55.154	78
79	56.588	55.125	56.347	55.372	56.105	55.617	55.861	55.861	79
80	57.304	55.823	57.060	56.073	56.815	56.321	56.569	56.569	80
81	58.020	56.521	57.773	56.774	57.525	57.025	57.276	57.276	81
82	58.737	57.219	58.486	57.475	58.235	57.729	57.983	57.983	82
83	59.453	57.917	59.200	58.176	58.945	58.433	58.690	58.690	83
84	60.169	58.614	59.913	58.876	59.656	59.137	59.397	59.397	84
85	60.886	59.312	60.626	59.577	60.366	59.841	60.104	60.104	85
86	61.602	60.010	61.339	60.278	61.076	60.545	60.811	60.811	86
87	62.318	60.708	62.053	60.979	61.786	61.249	61.518	61.518	87
88	63.035	61.406	62.766	61.680	62.496	61.953	62.225	62.225	88
89	63.751	62.103	63.479	62.381	63.206	62.657	62.933	62.933	89
90	64.467	62.801	64.192	63.082	63.917	63.361	63.640	63.640	90
91	65.183	63.499	64.906	63.783	64.627	64.065	64.347	64.347	91
92	65.900	64.197	65.619	64.484	65.337	64.769	65.054	65.054	92
93	66.616	64.894	66.332	65.185	66.047	65.473	65.761	65.761	93
94	67.332	65.592	67.045	65.886	66.757	66.177	66.468	66.468	94
95	68.049	66.290	67.759	66.586	67.468	66.881	67.175	67.175	95
96	68.765	66.988	68.472	67.287	68.178	67.585	67.882	67.882	96
97	69.481	67.686	69.185	67.988	68.888	68.289	68.589	68.589	97
98	70.198	68.383	69.898	68.689	69.598	68.993	69.296	69.296	98
99	70.914	69.081	70.612	69.390	70.308	69.697	70.004	70.004	99
100	71.630	69.779	71.325	70.091	71.019	70.401	70.711	70.711	100
Diſt.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	E. W.	N. S.	Diſt.
	45 Min.		30 Min.		15 Min.		0 Min.		
	45 Degrees.								

F I N I S.

PLATES

TO THE

GEOMETRICAL

AND

GRAPHICAL ESSAYS,

BY THE LATE

GEORGE ADAMS,

MATHEMATICAL INSTRUMENT MAKER TO HIS MAJESTY, &c.

THE THIRD EDITION,

CORRECTED AND ENLARGED BY

WILLIAM JONES, F. Am. P. S.

LONDON:

PRINTED BY W. GLENDINNING, 25, HATTON GARDEN,
FOR, AND SOLD BY, W. AND S. JONES, OPTICIANS,
HOLBORN.

1803.

PLATE I.

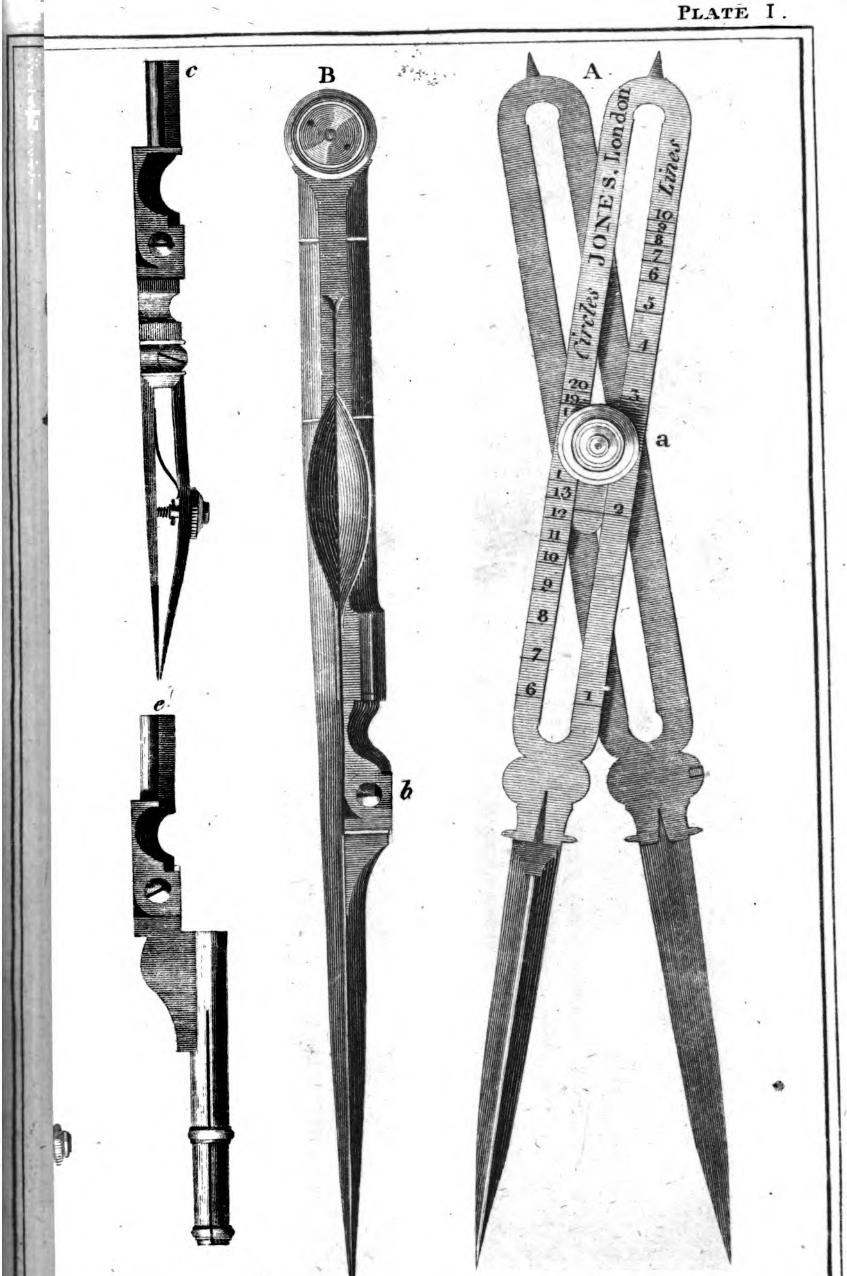

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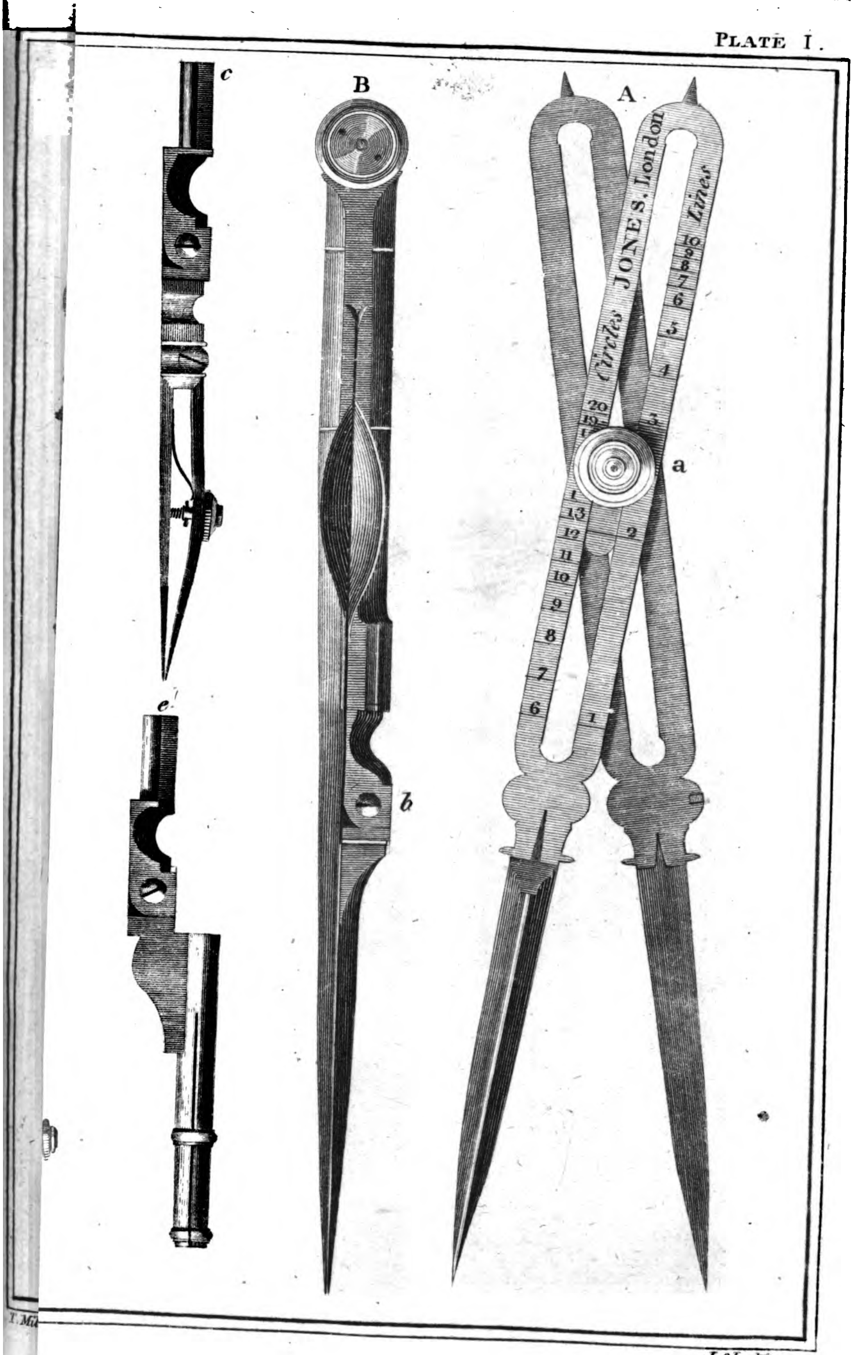
PLATE I.



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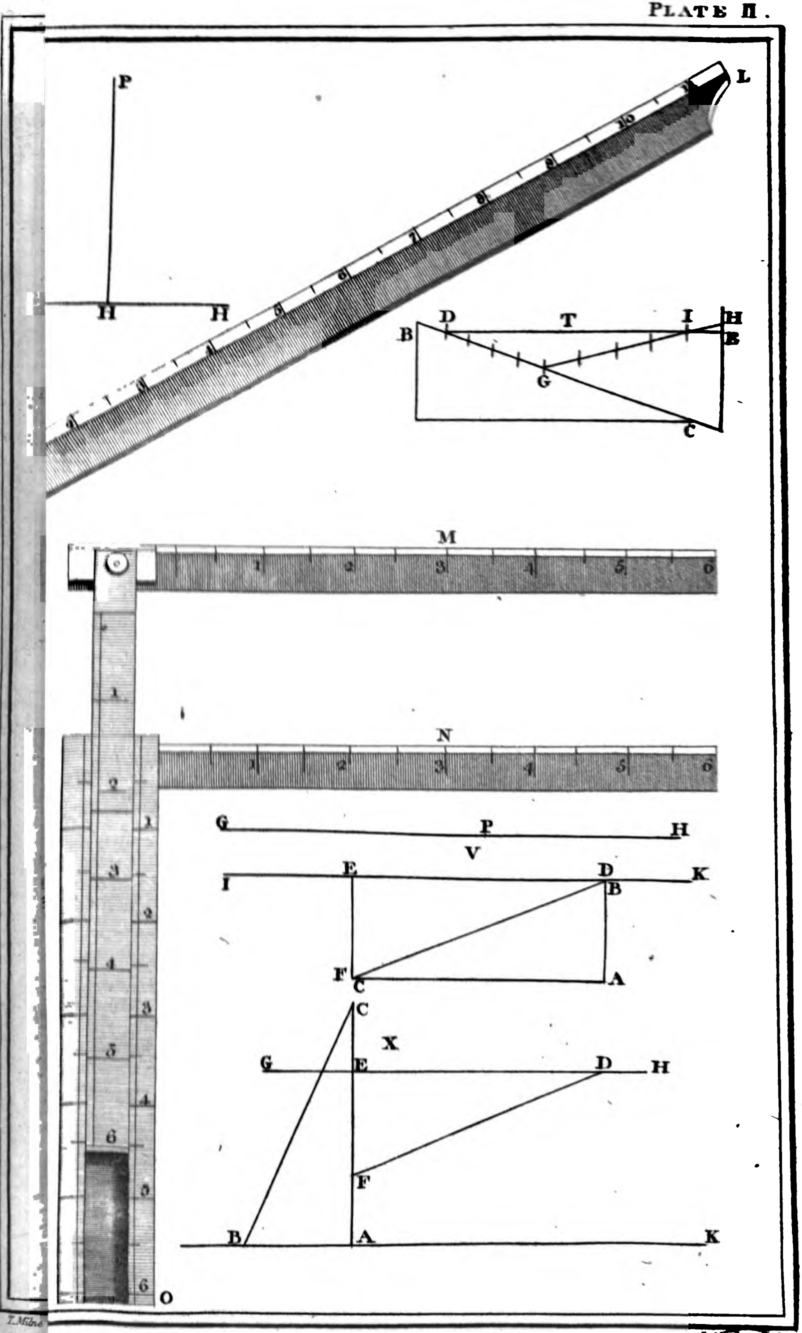

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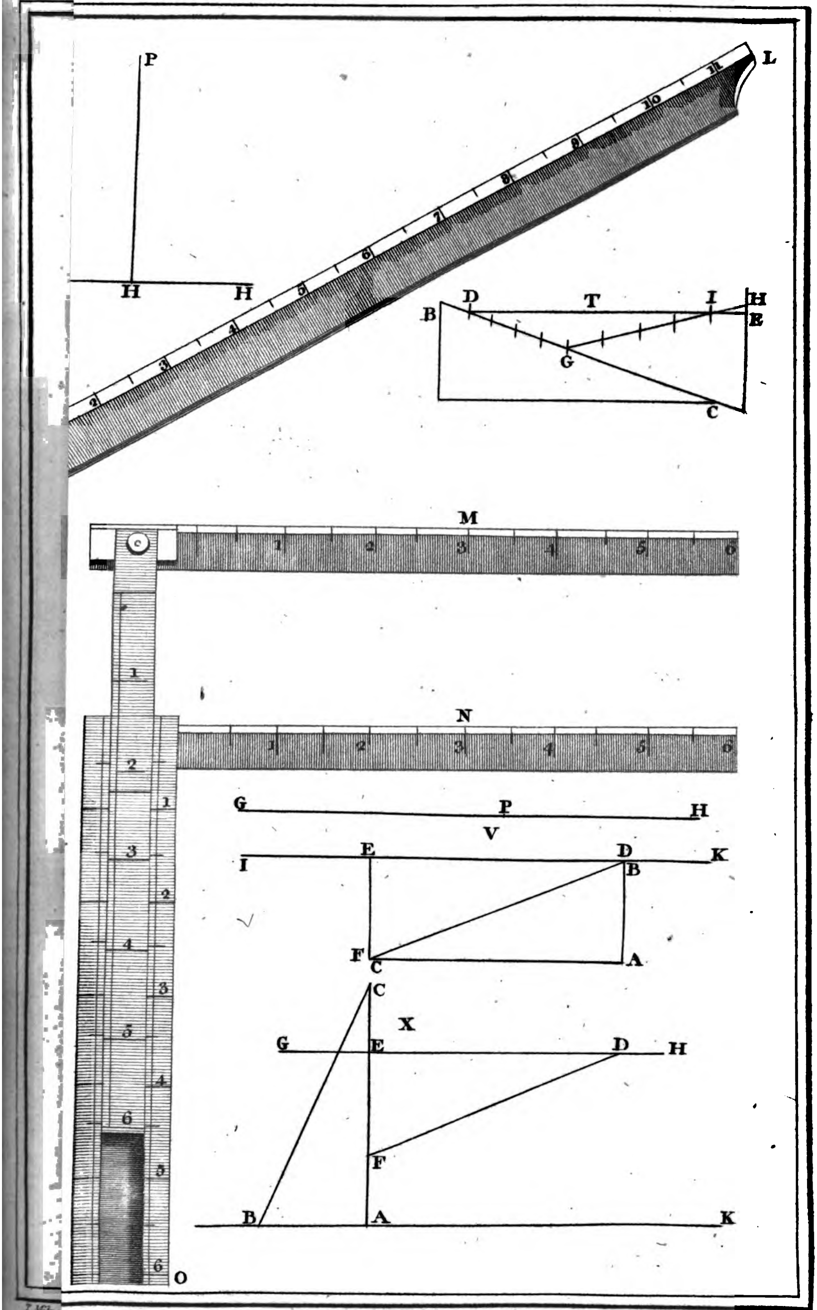

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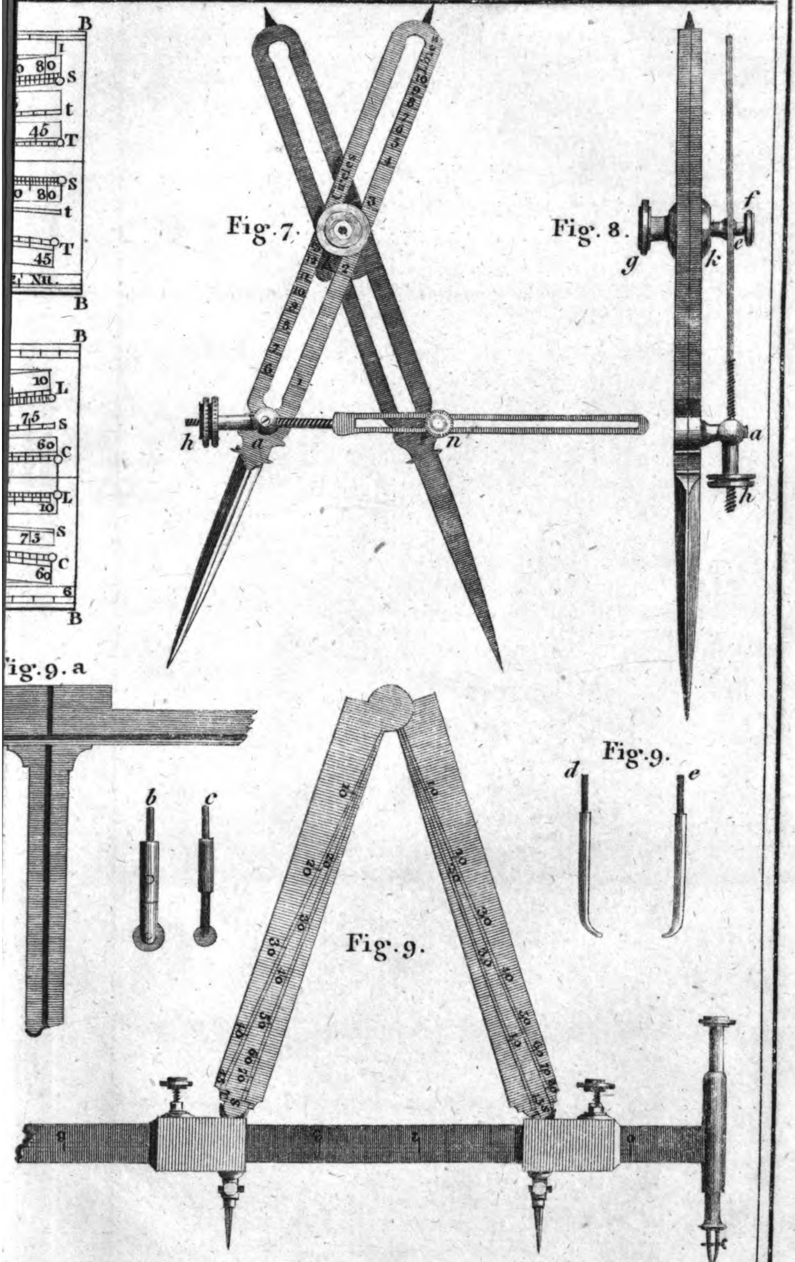

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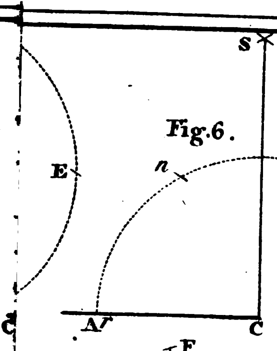

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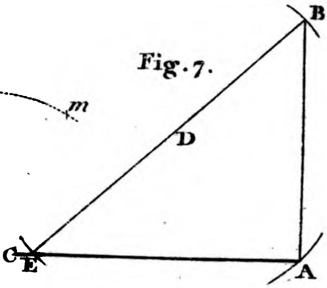

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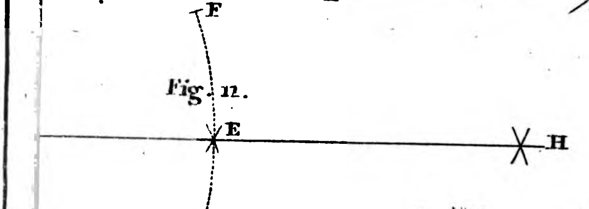

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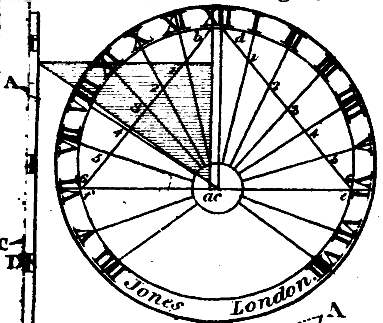

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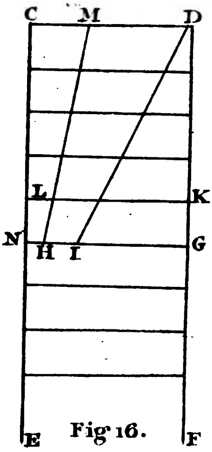

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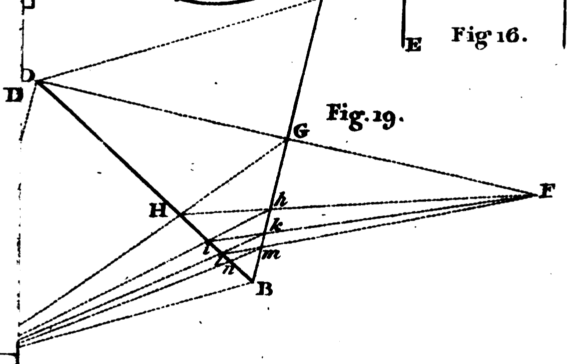

Fig. 19.

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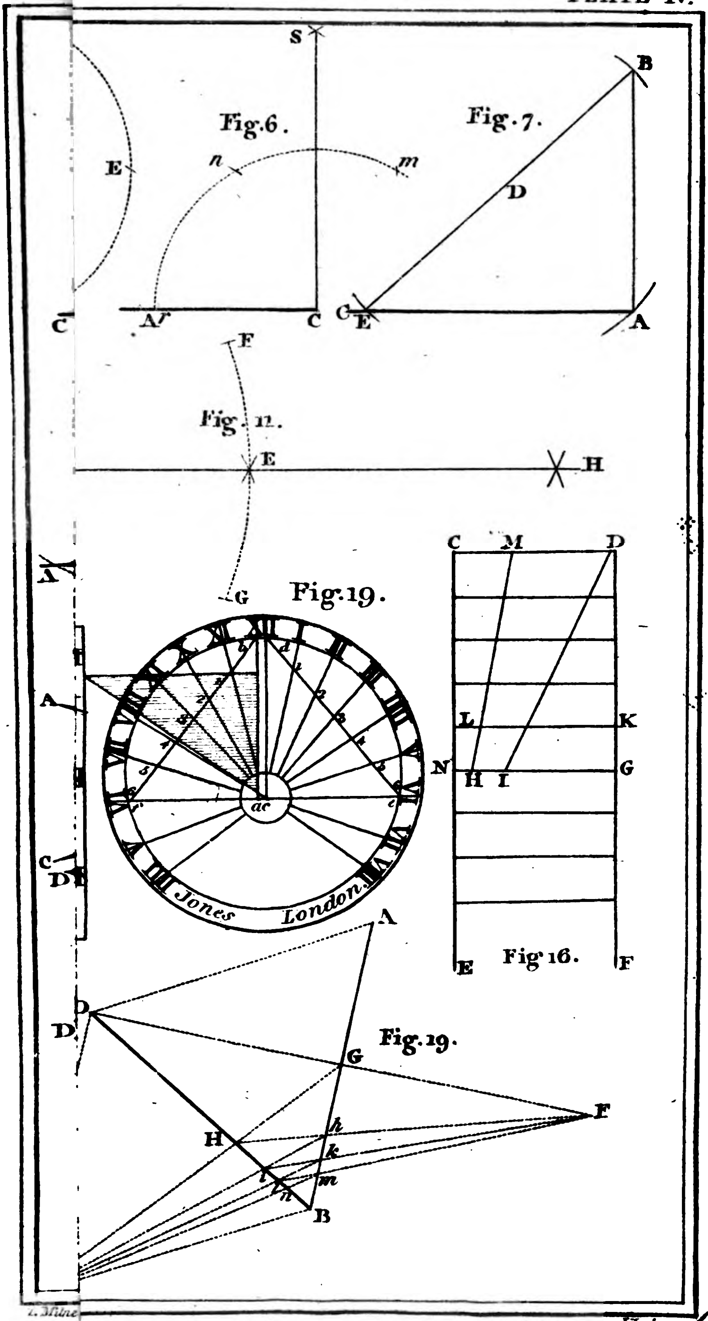

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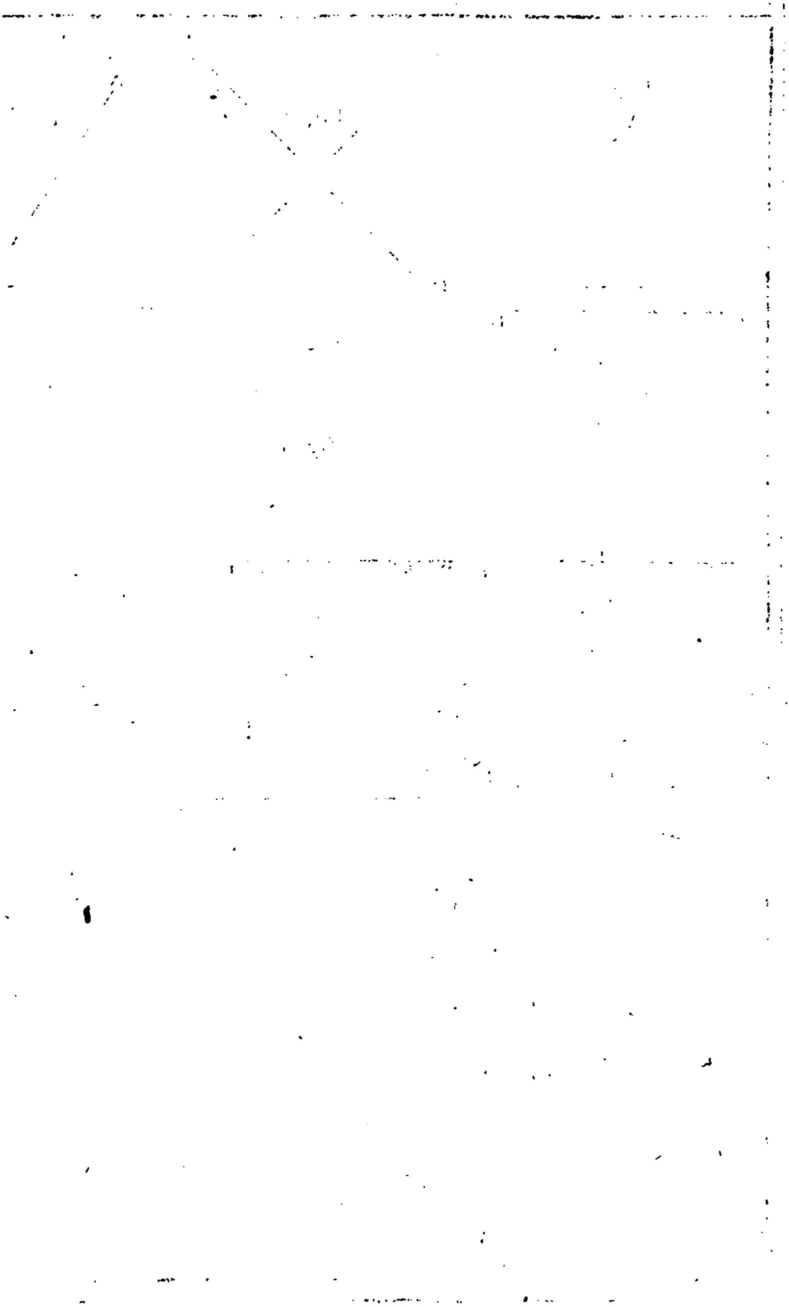

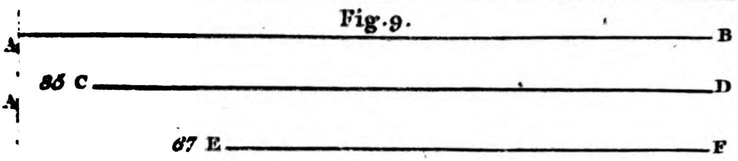

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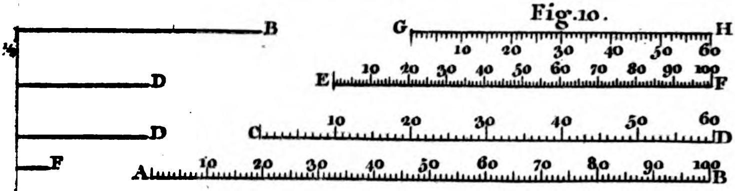

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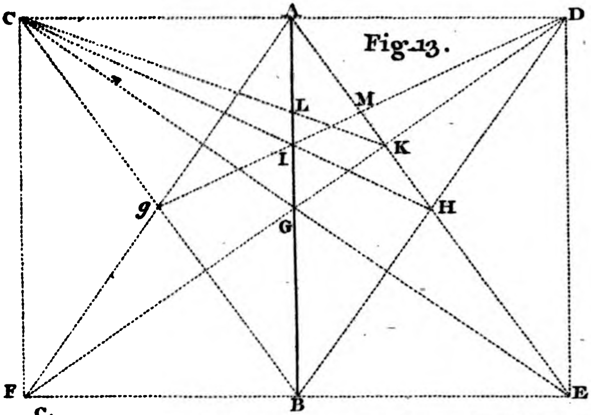

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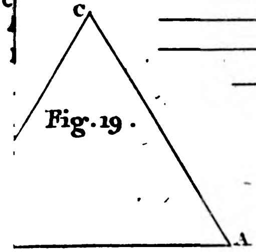

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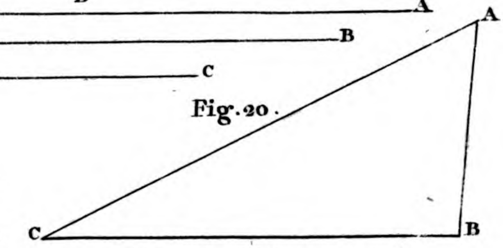

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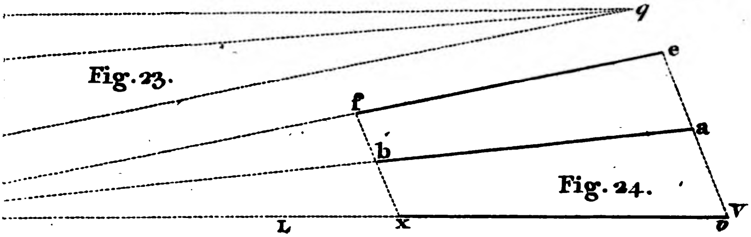

Fig. 23.

Fig. 24.

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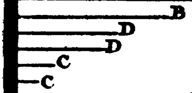

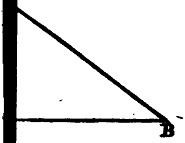

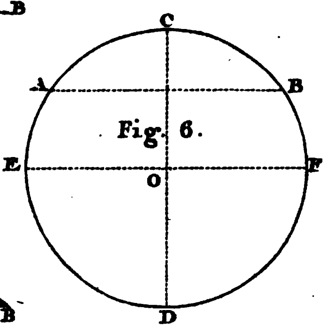
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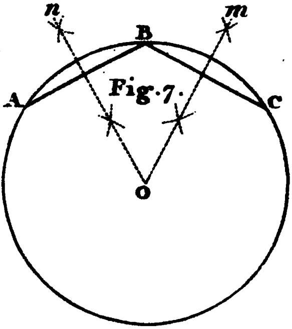
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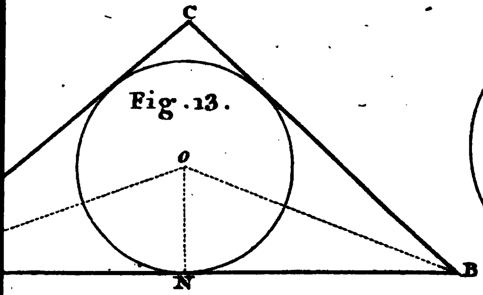
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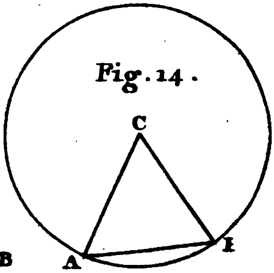
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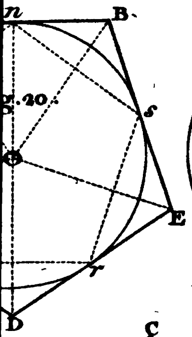
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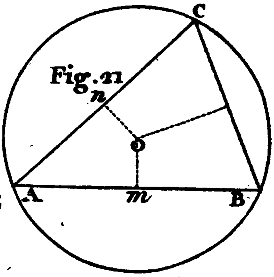
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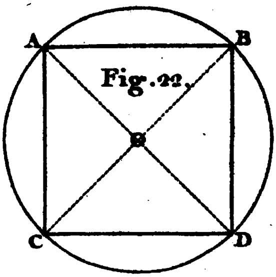
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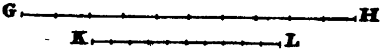

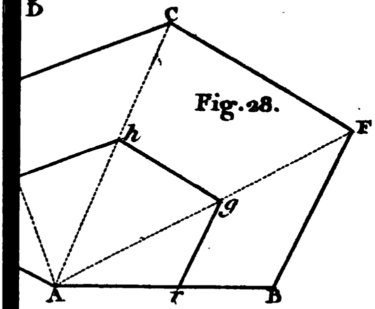
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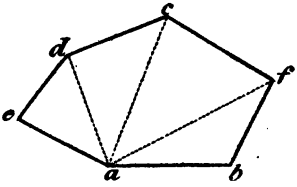
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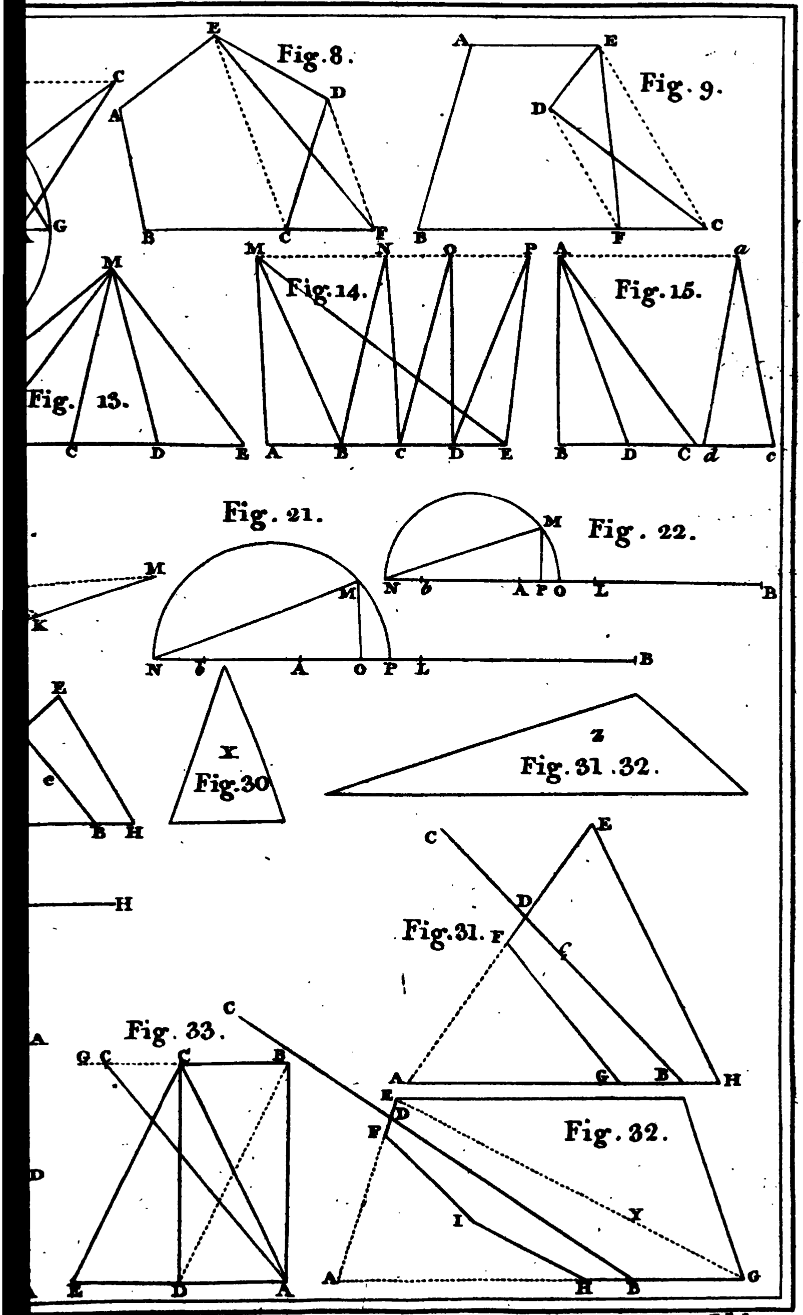

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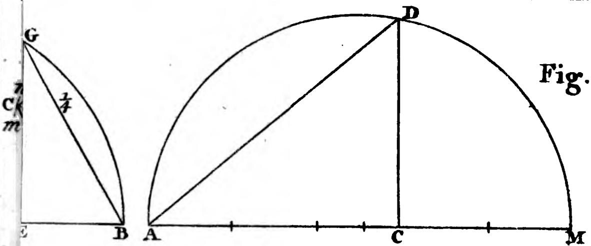

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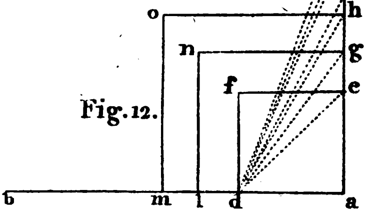

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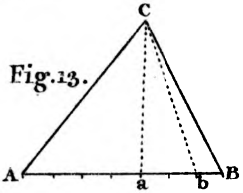

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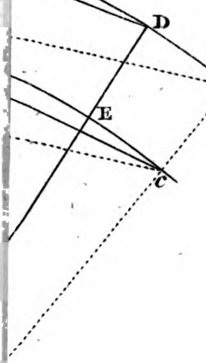

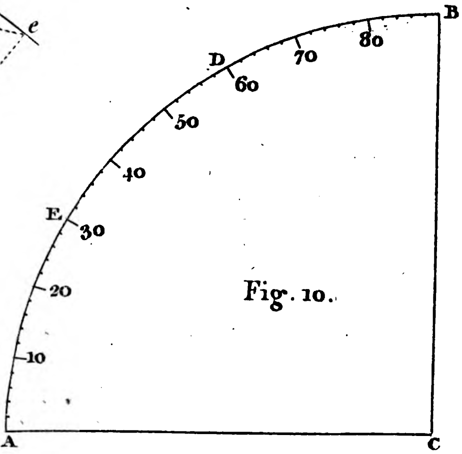

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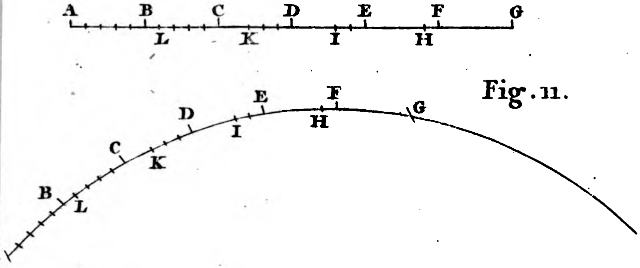

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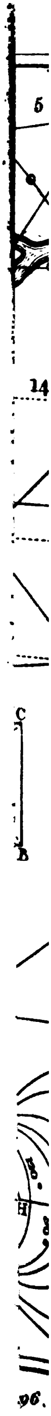
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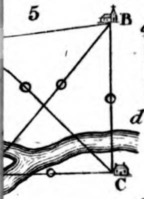

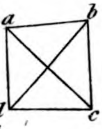

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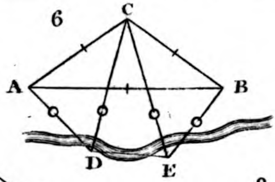

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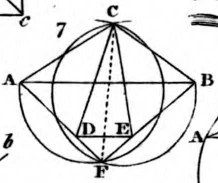

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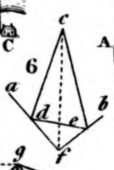

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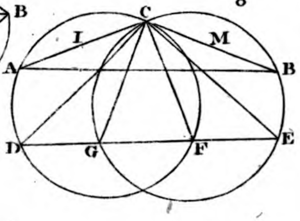

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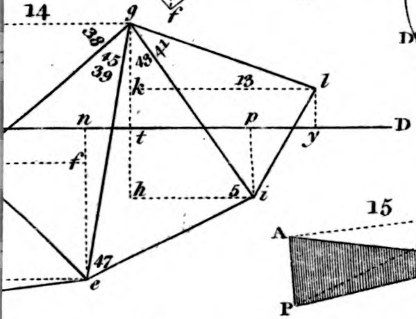

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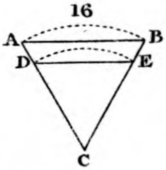

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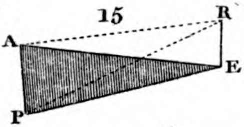

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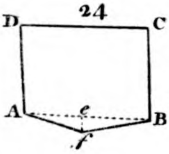

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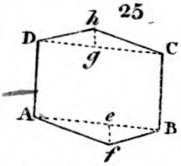

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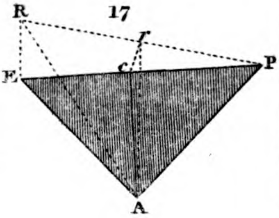

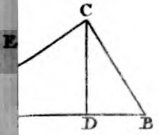

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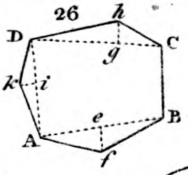

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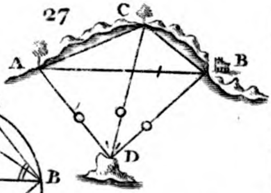

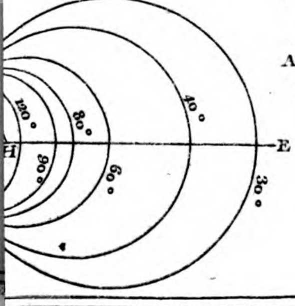

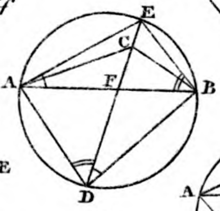

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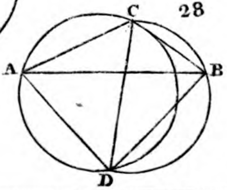

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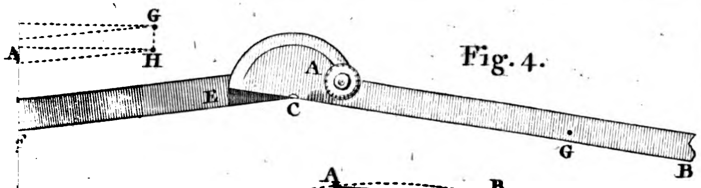
Fig. 4.



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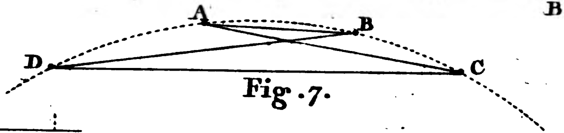

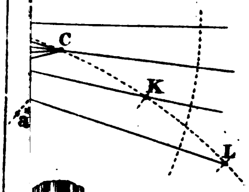

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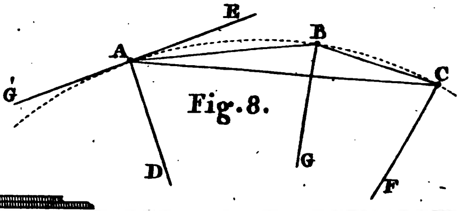

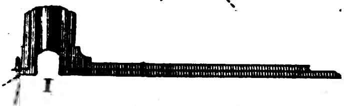

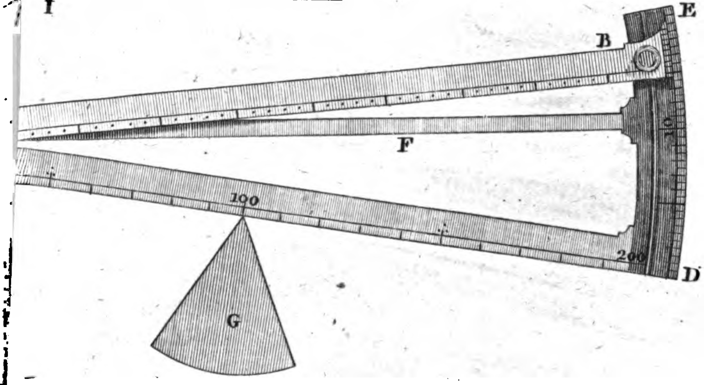

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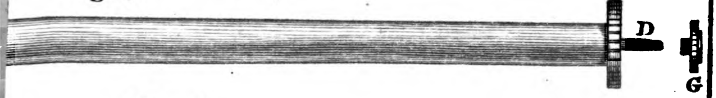

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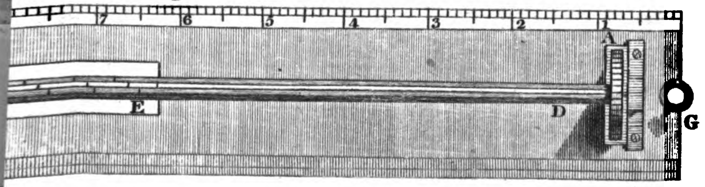

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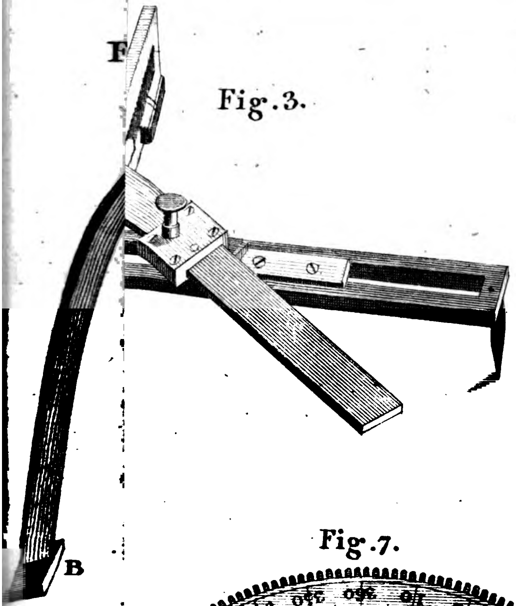
Fig. 3.



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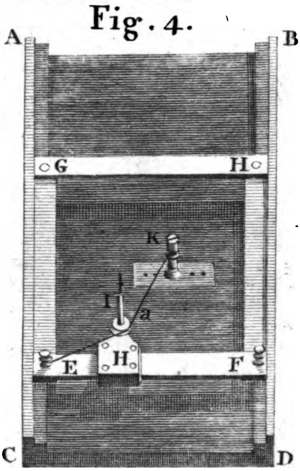

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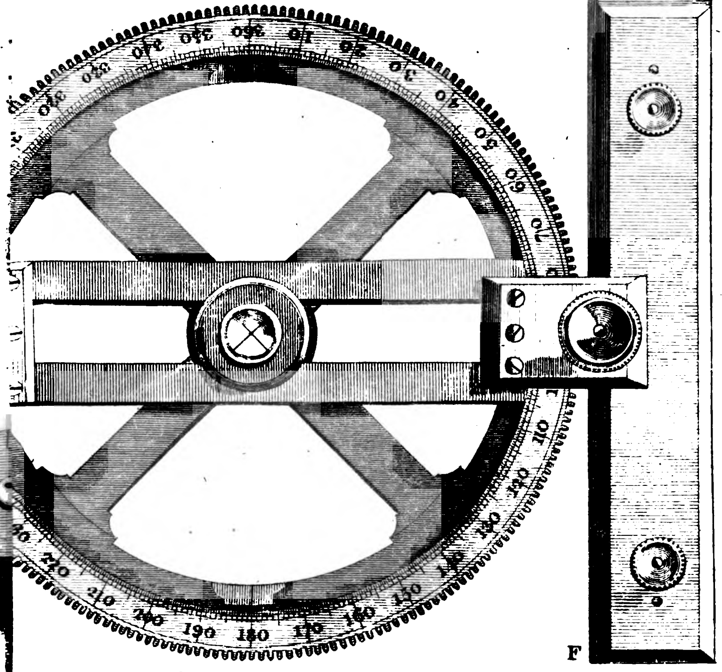

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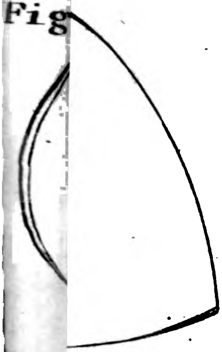

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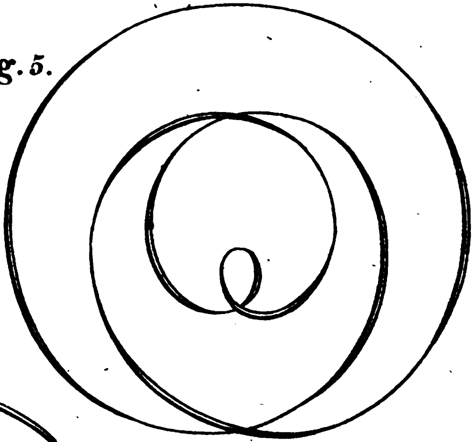

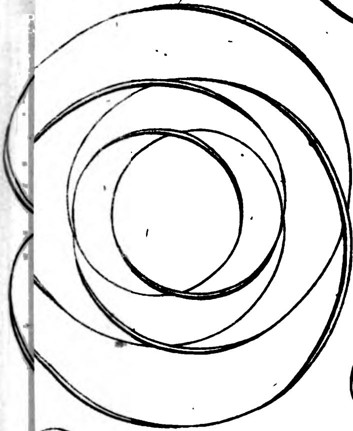

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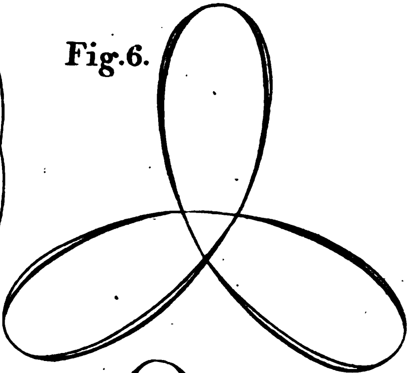

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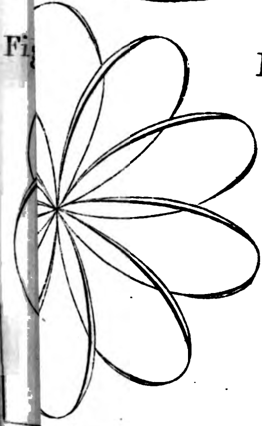

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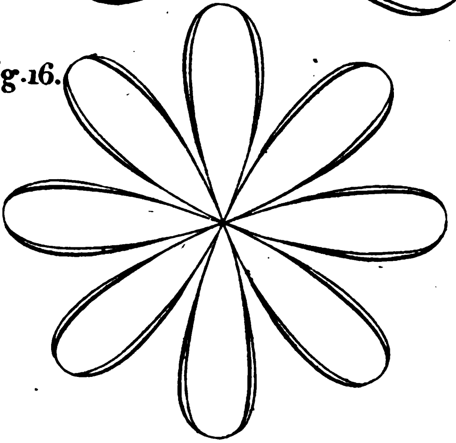

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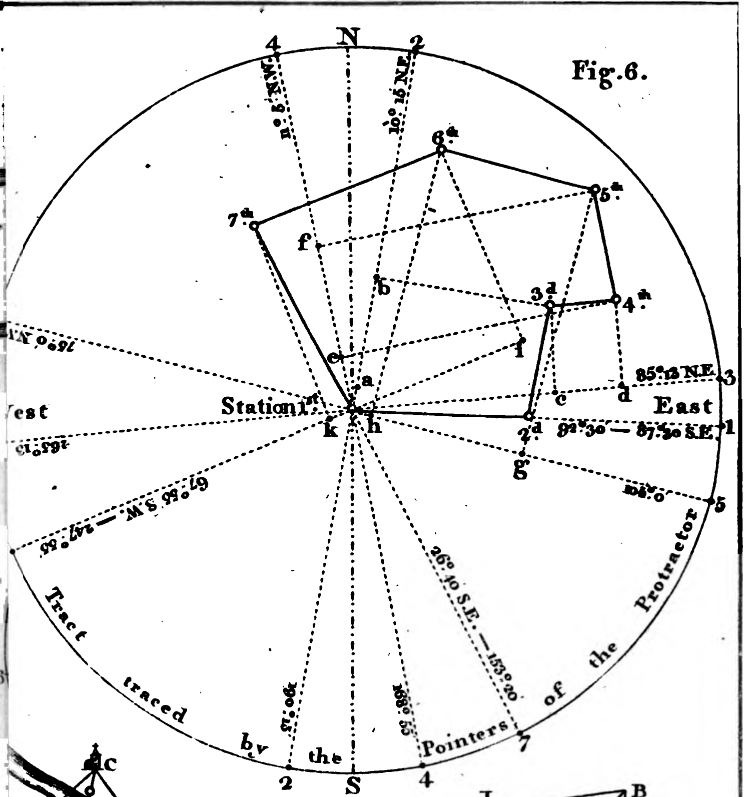

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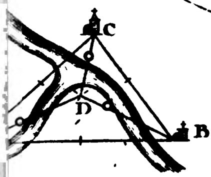

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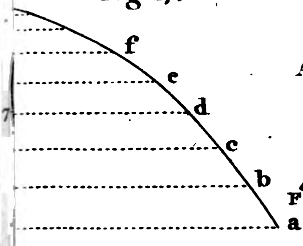


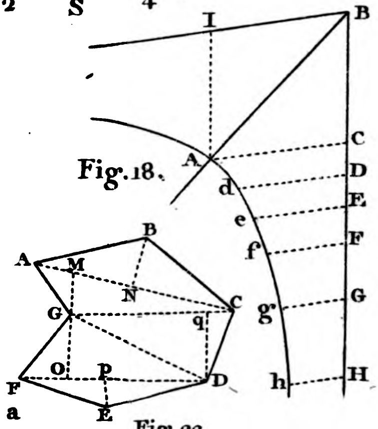
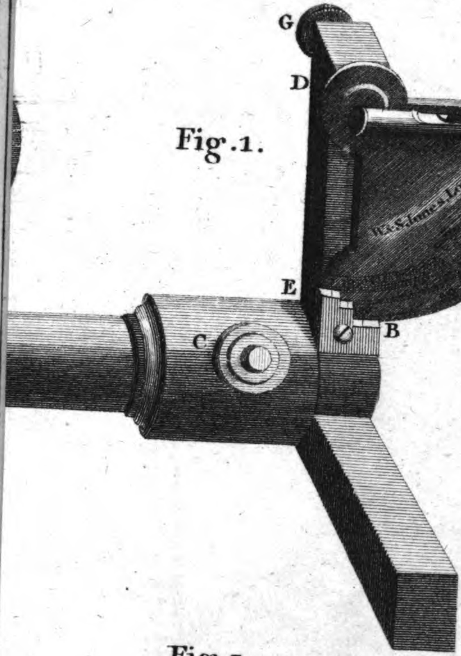


Fig. 18.

Fig. 22.

Jn° Lodge sculp

Fig. 1.



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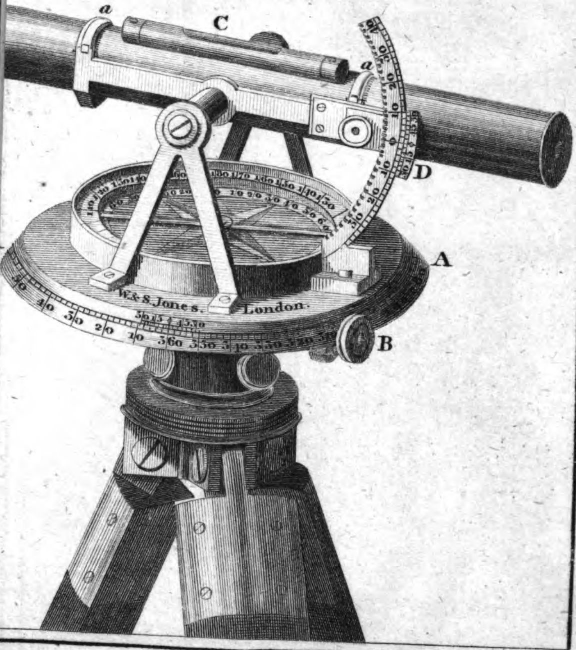

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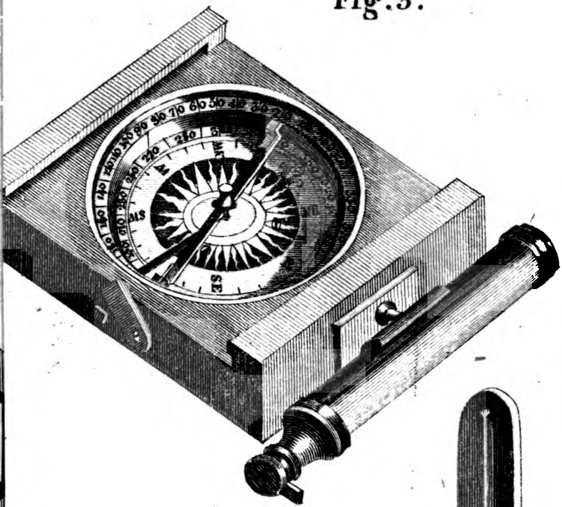
Fig. 3.



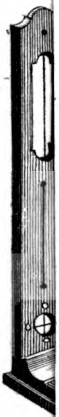


Fig. 1.

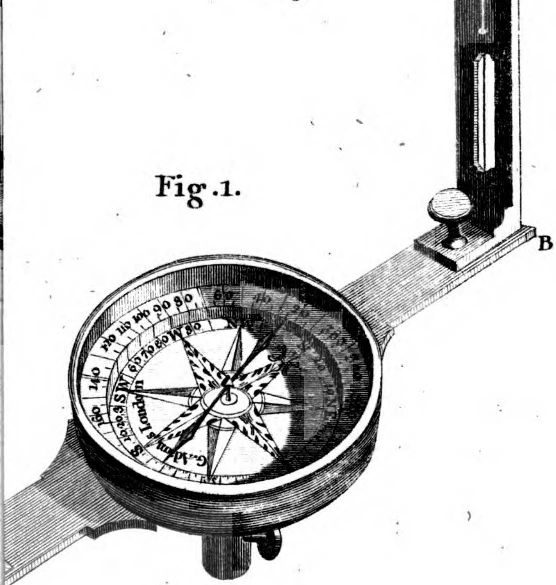


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PLATE XVI.

Fig. 1.

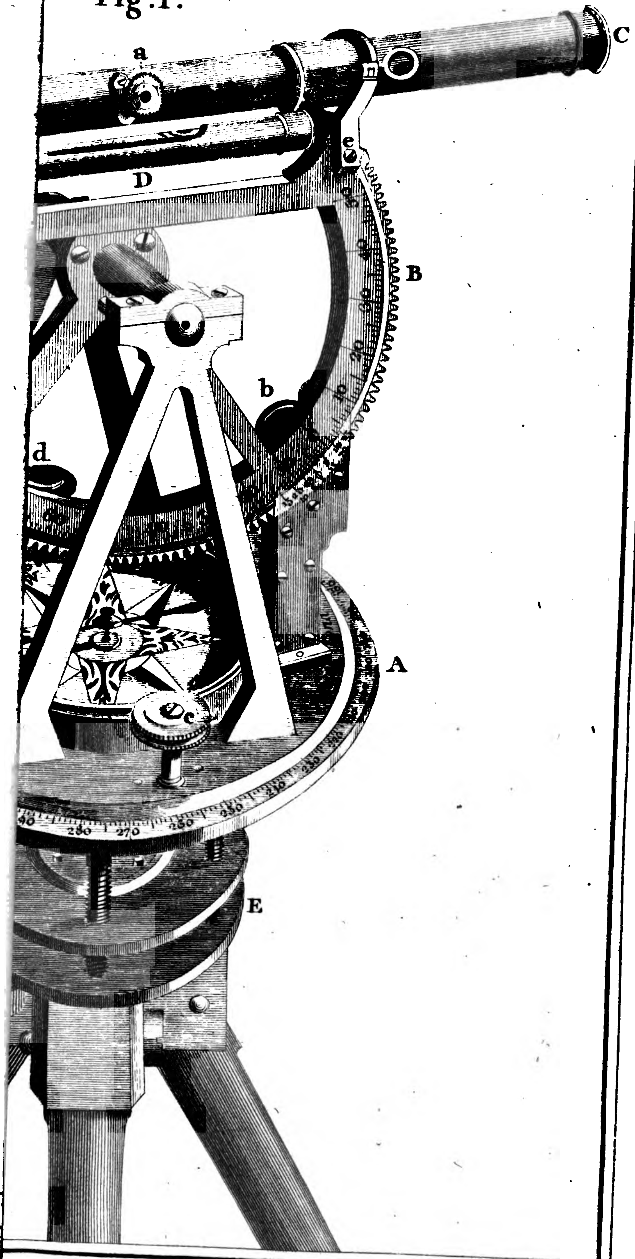

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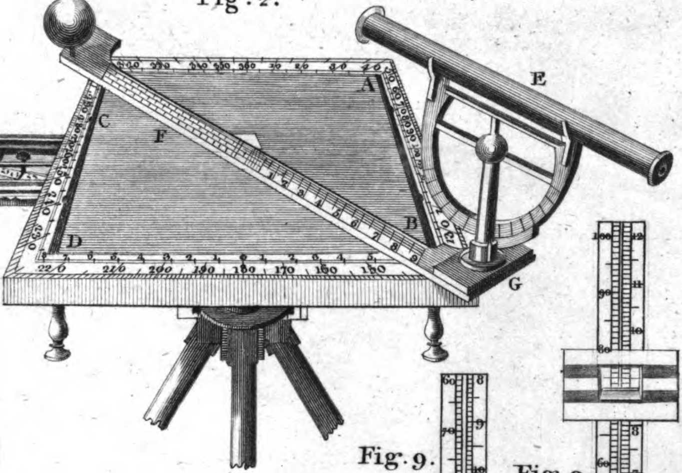
Fig. 2.



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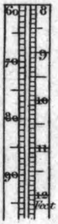

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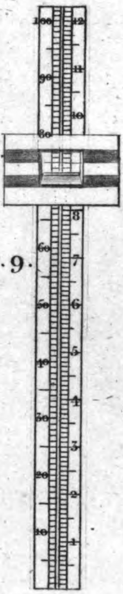

Fig. 5.

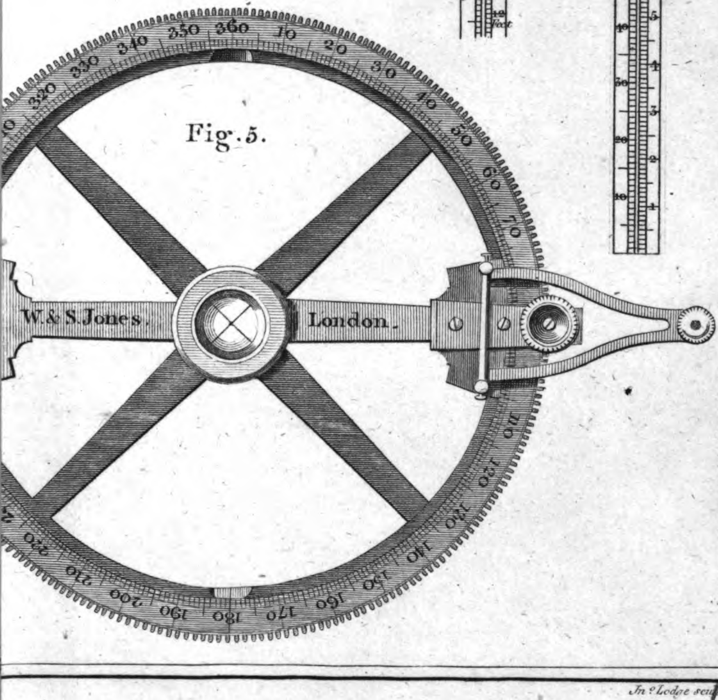

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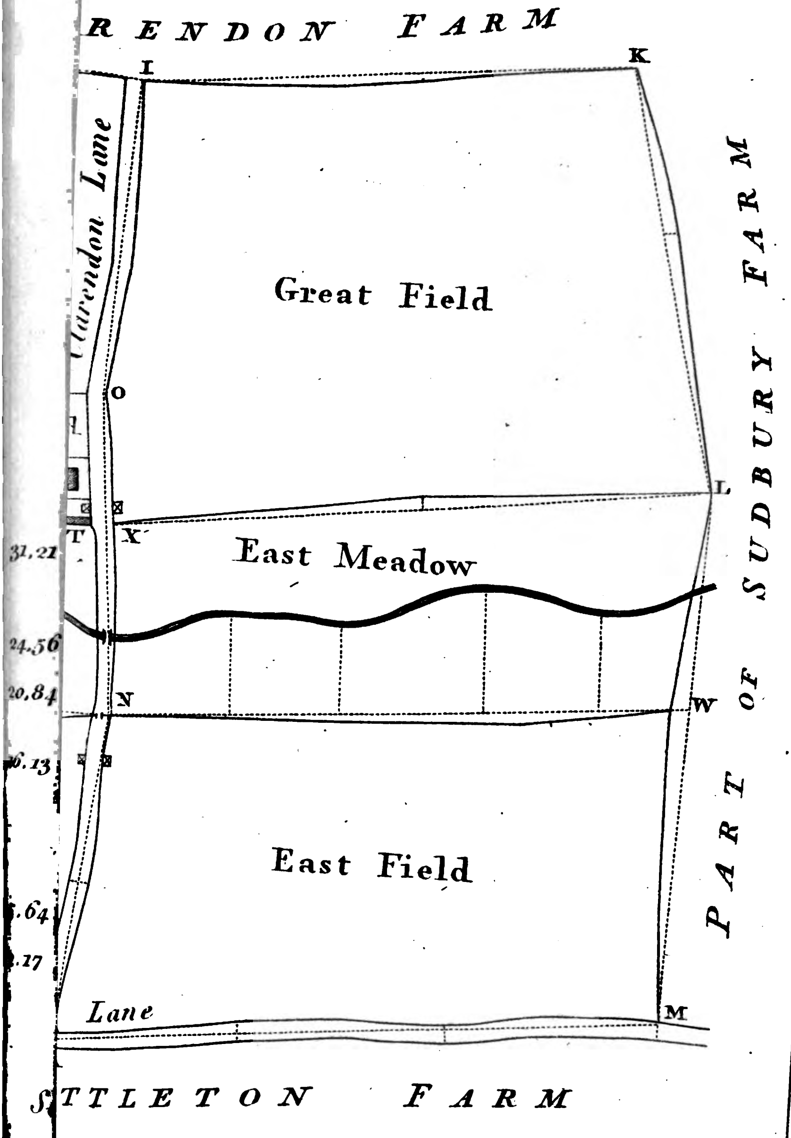
PLATE XVIII.

Fig. 5.



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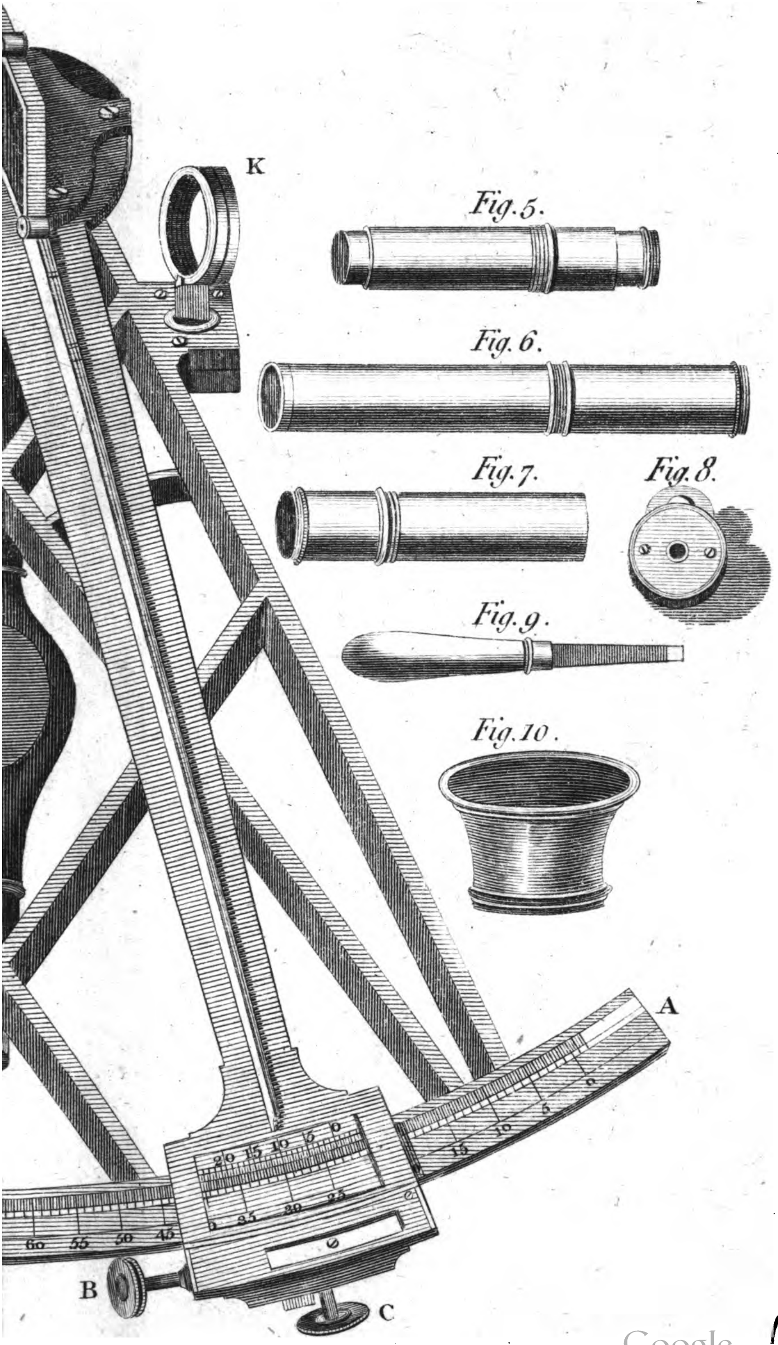

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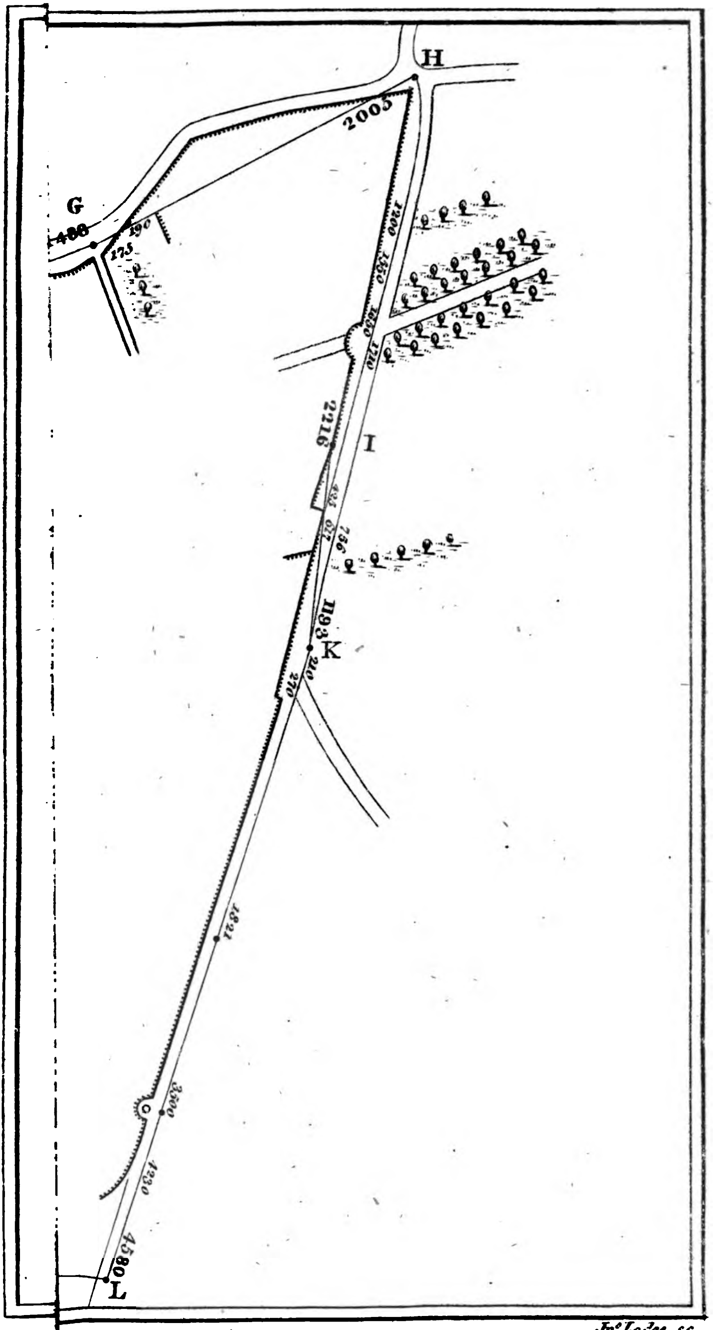

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PLATE XXI.

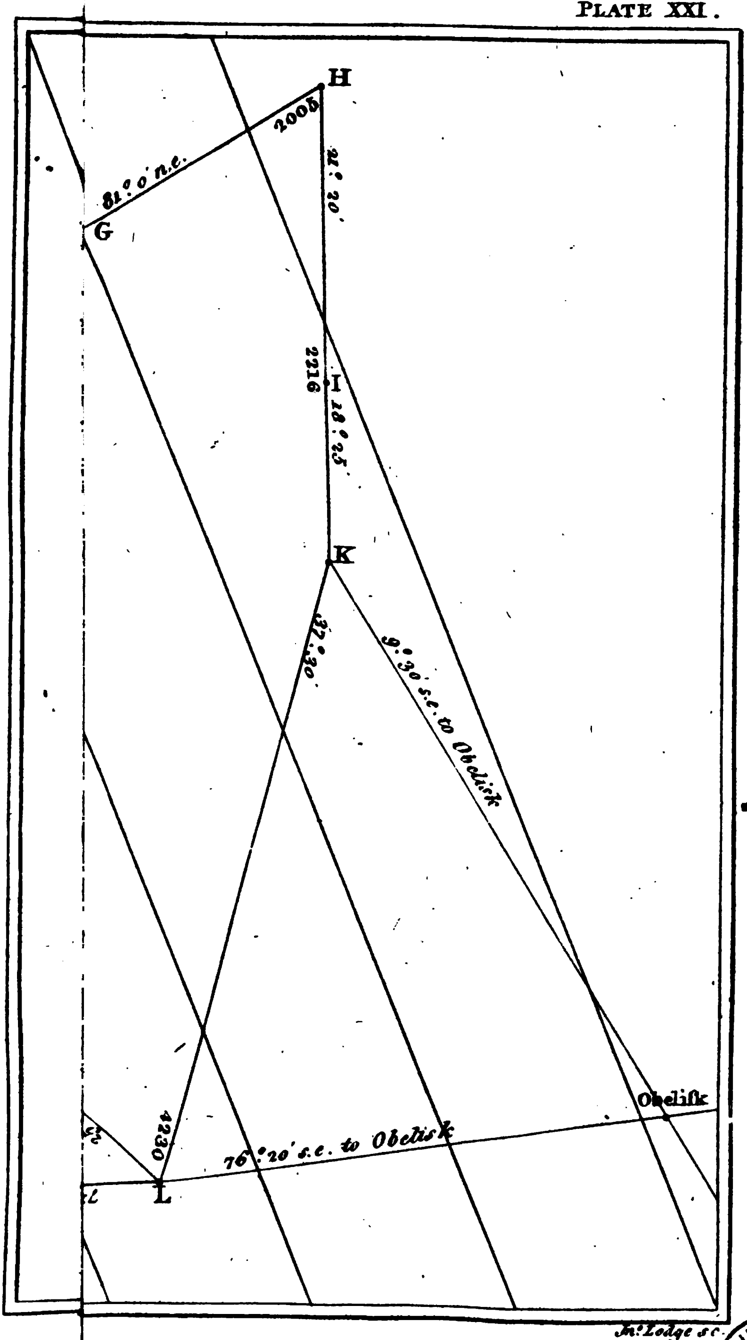

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PLATE XXII.

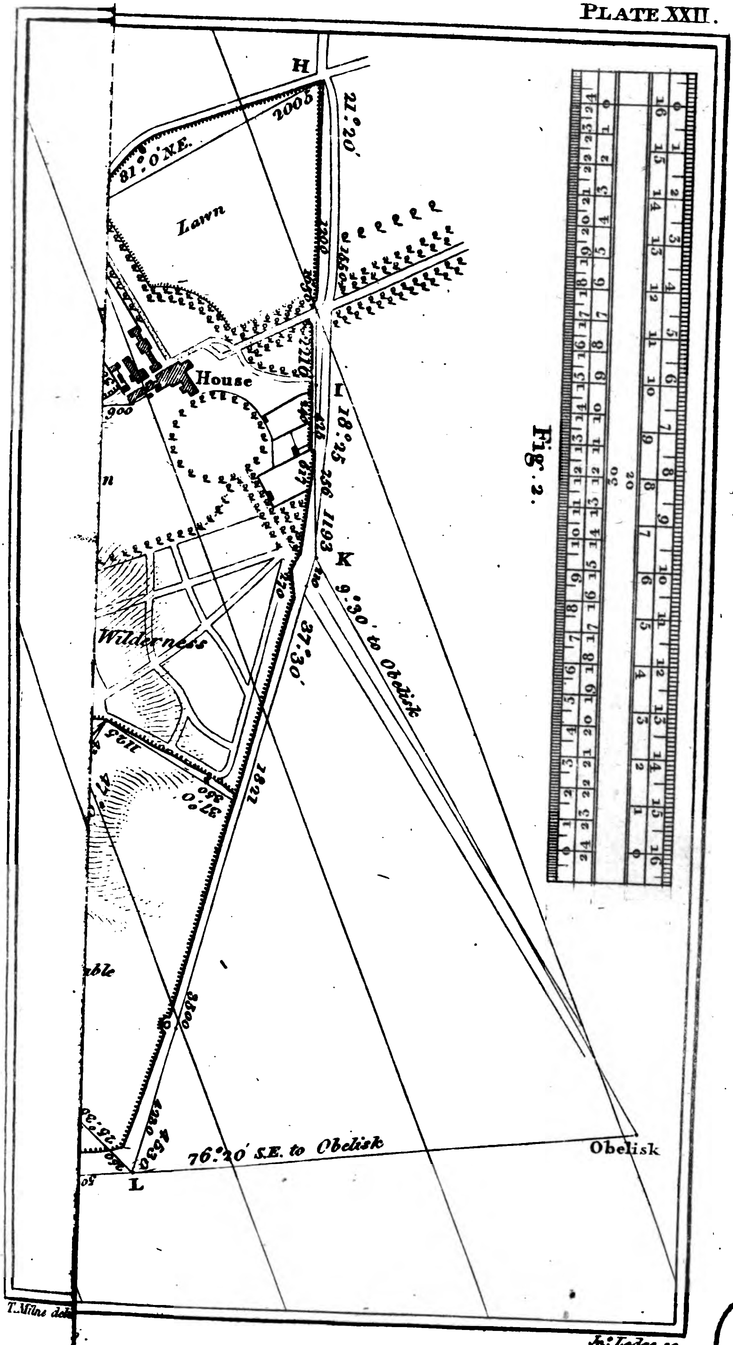

Fig. 2.

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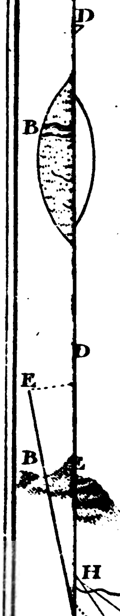

Fig. 11.

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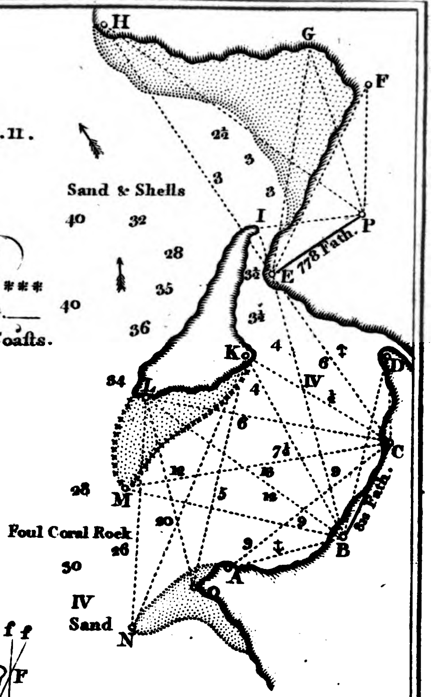

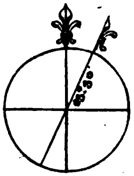

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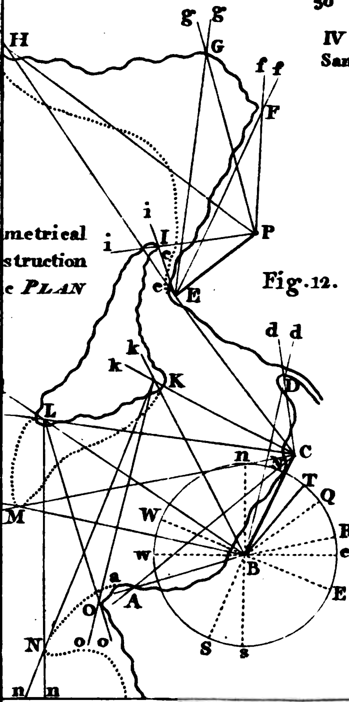
Fig. 12.



Scale of Geographical Miles.

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PLATE XXIV.

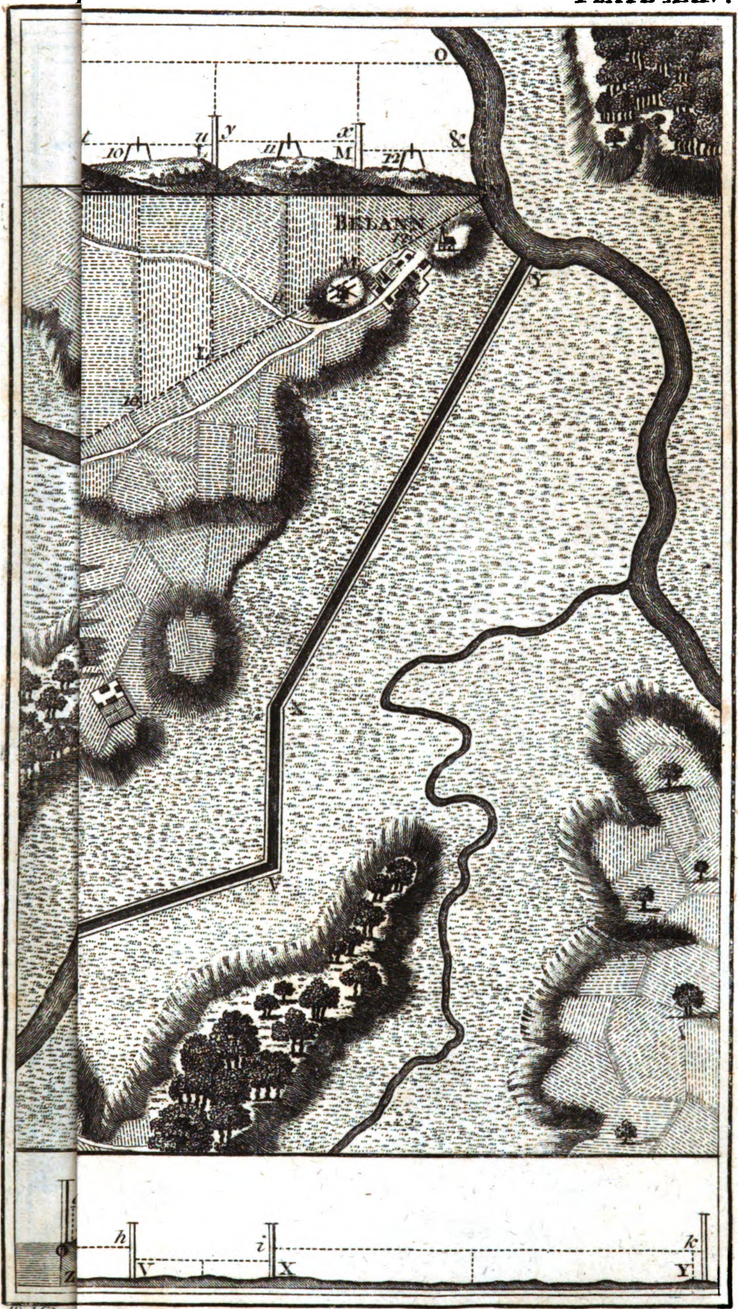

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PLATE XXV.

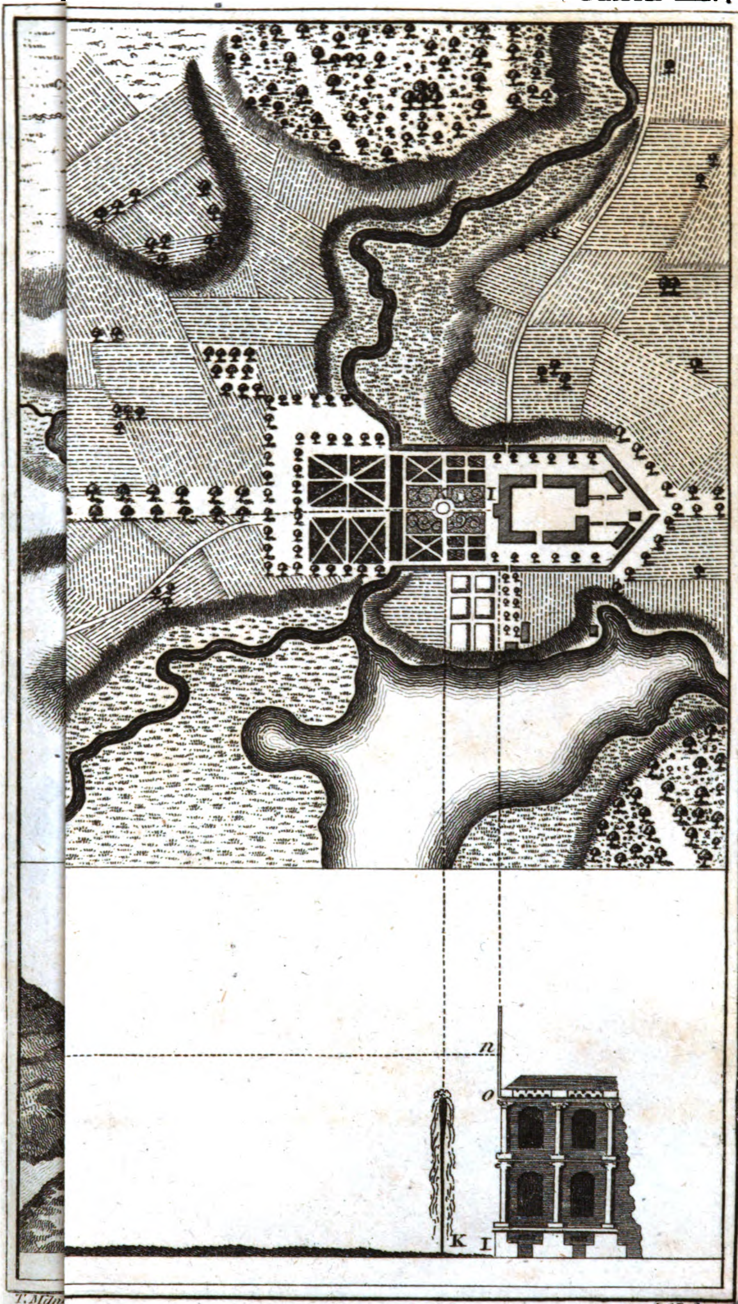

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PLATE XXVI.

g. 1.

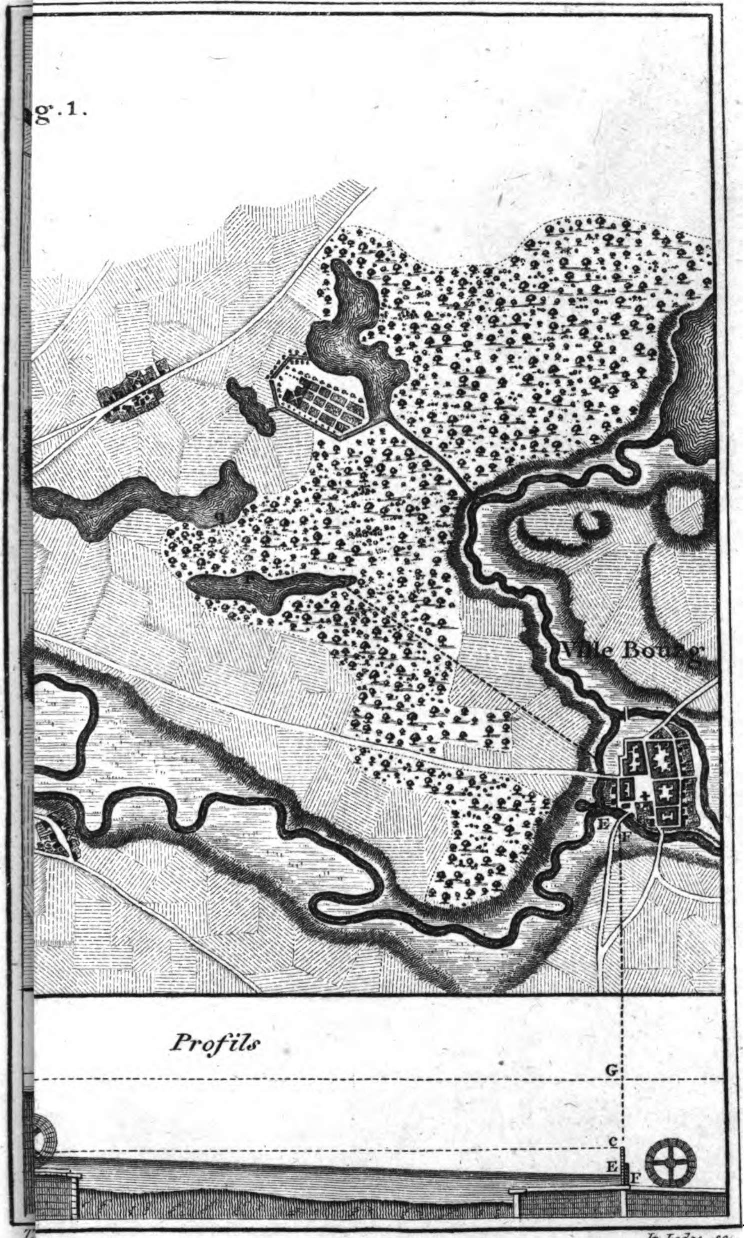

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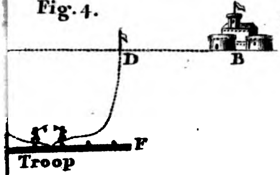
Fig. 4.



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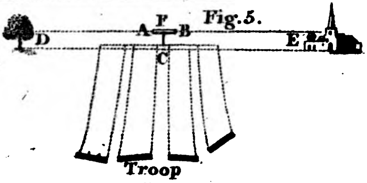

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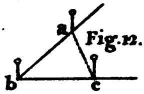

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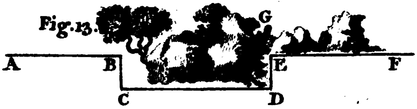

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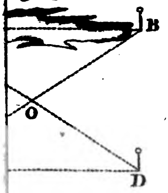

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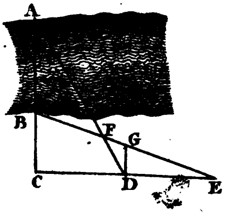

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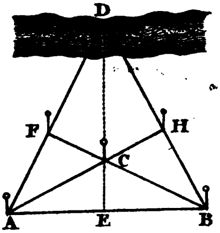

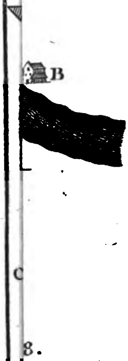

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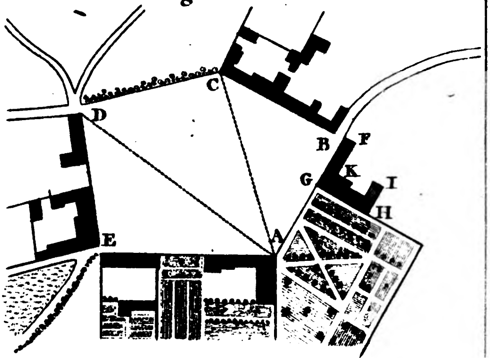
Fig. 26.



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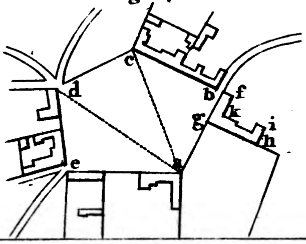

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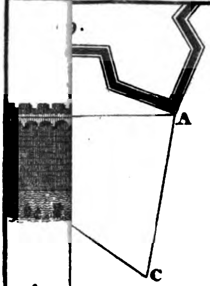

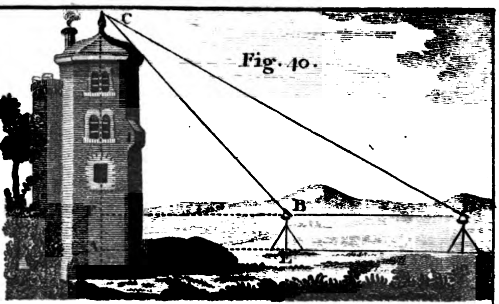

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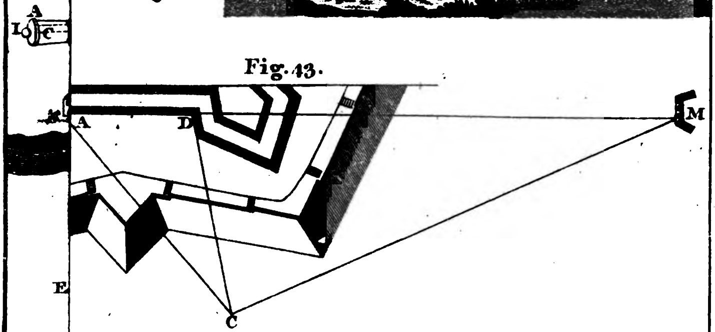

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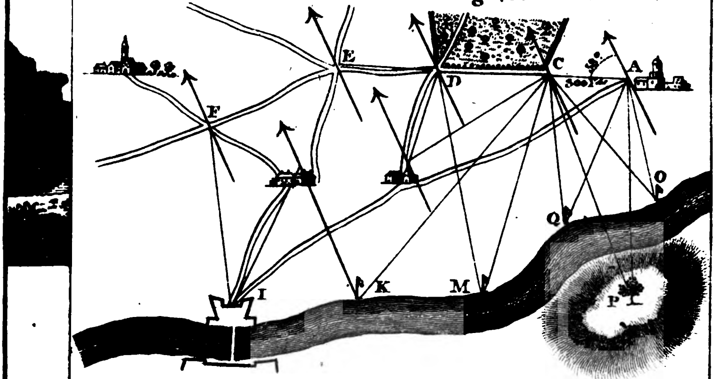

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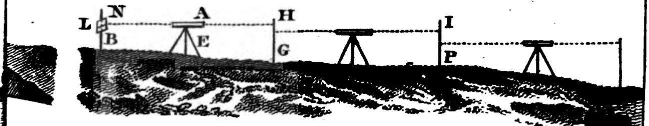

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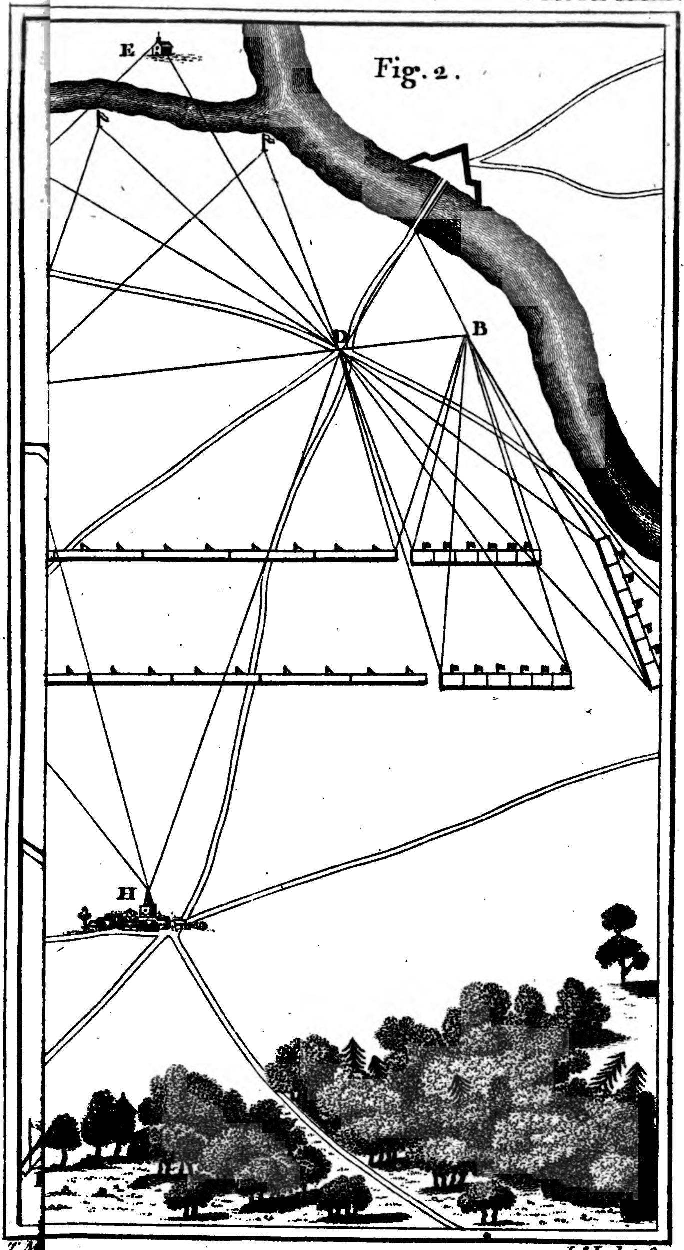

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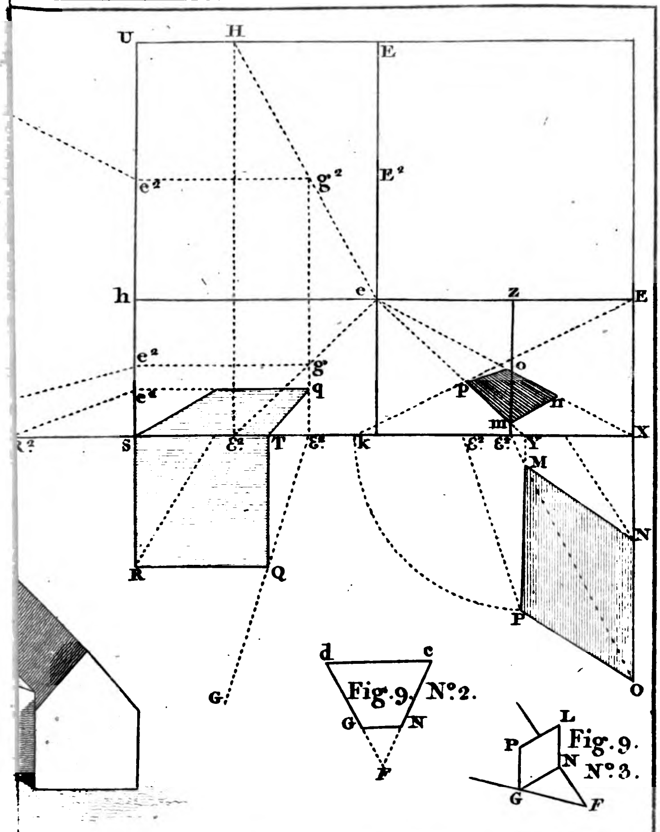

Fig. 9. N°. 2.

Fig. 9. N°. 3.

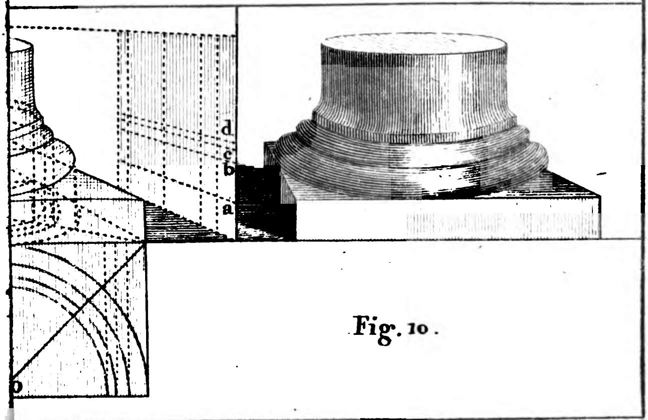

Fig. 10.

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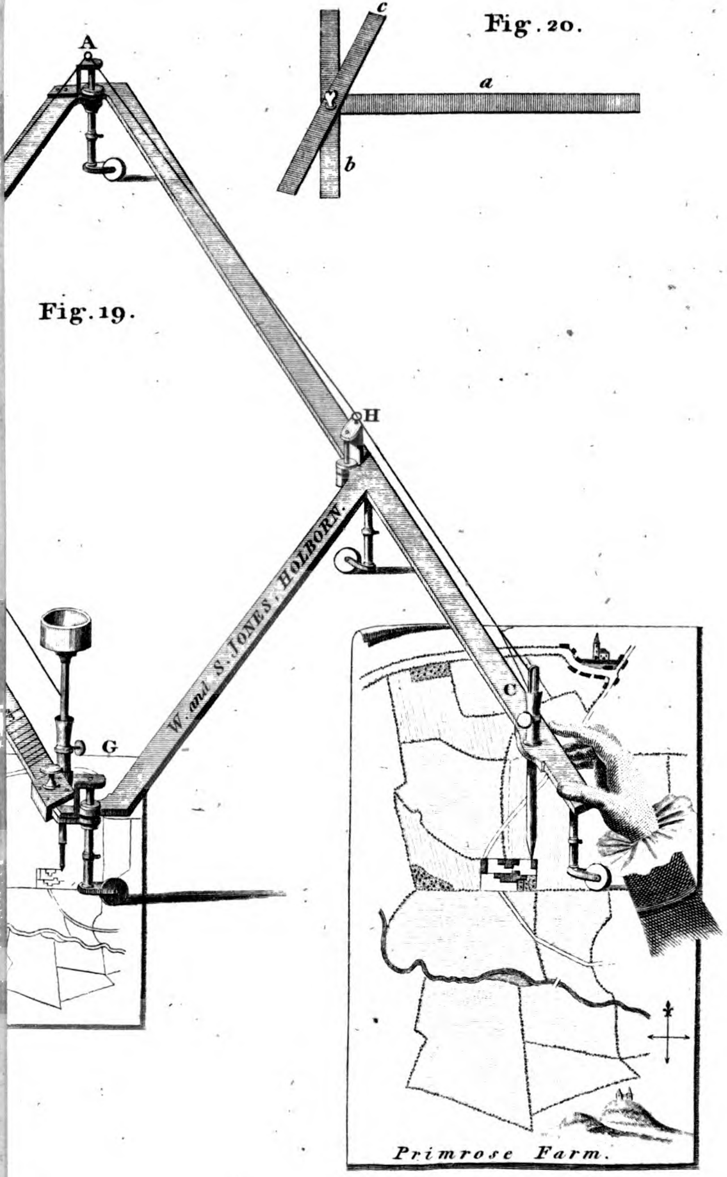
PLATE XXXI.



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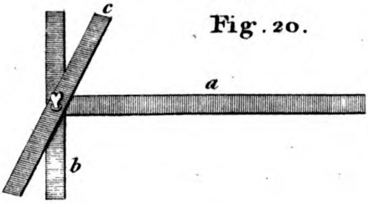

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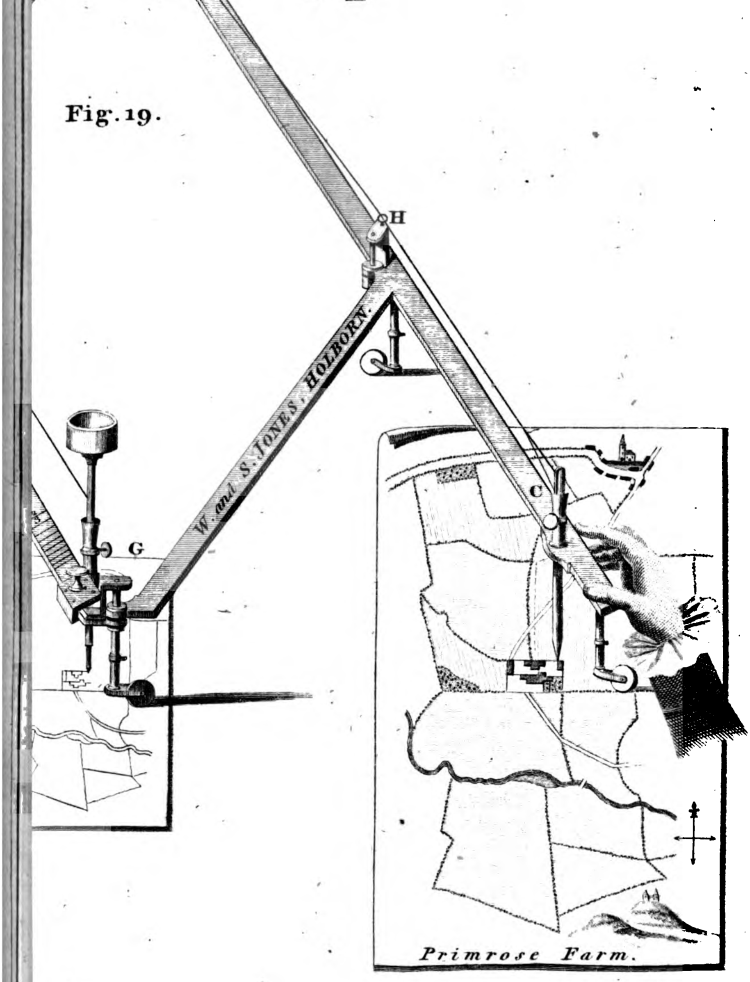

Fig. 19.

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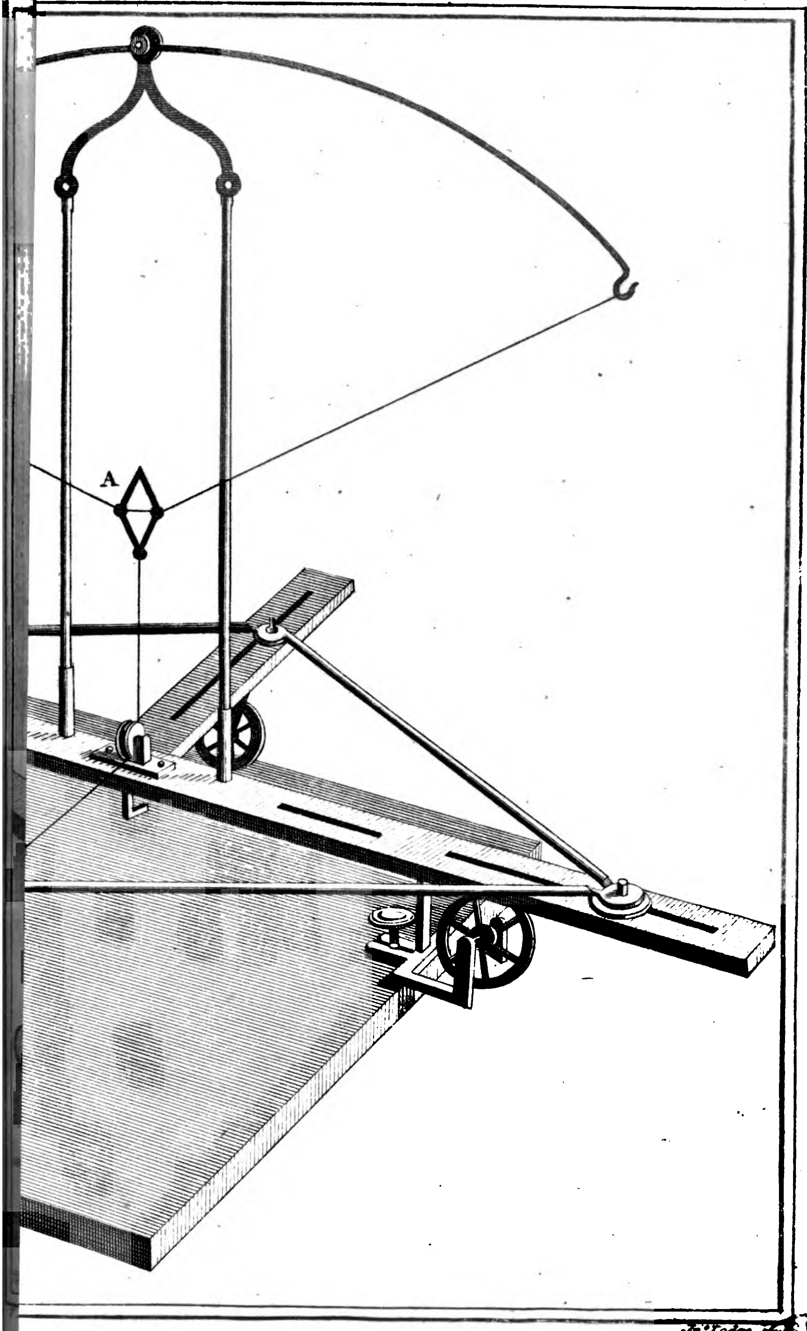
PLATE XXXII.



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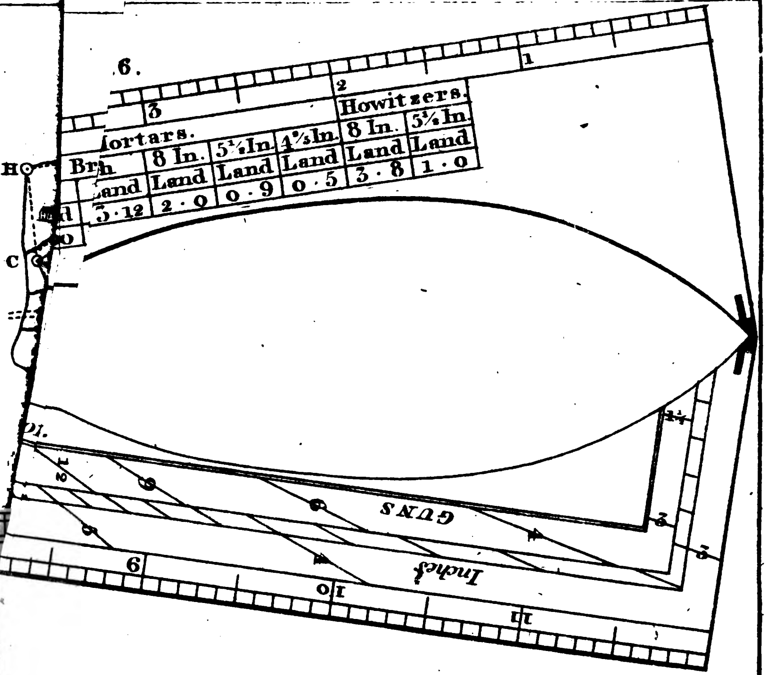
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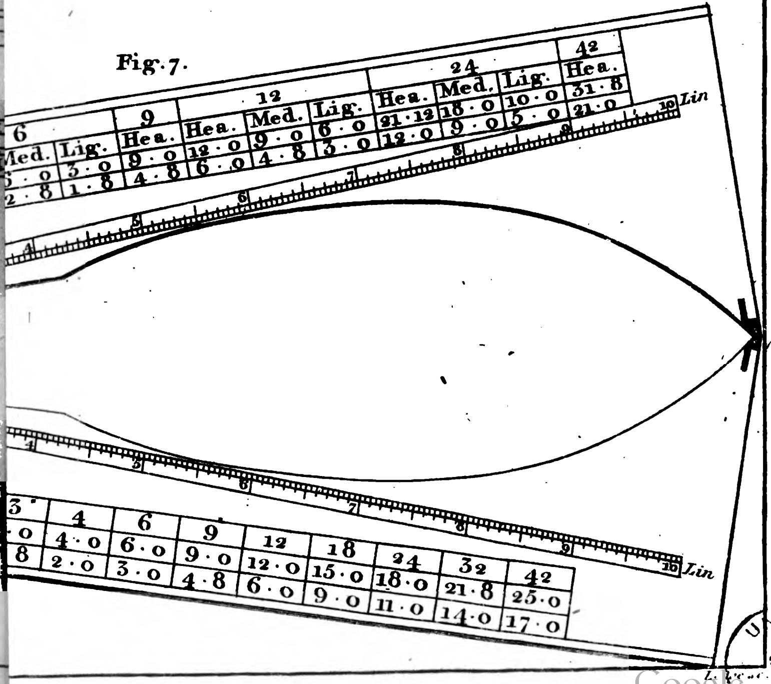
Fig. 7.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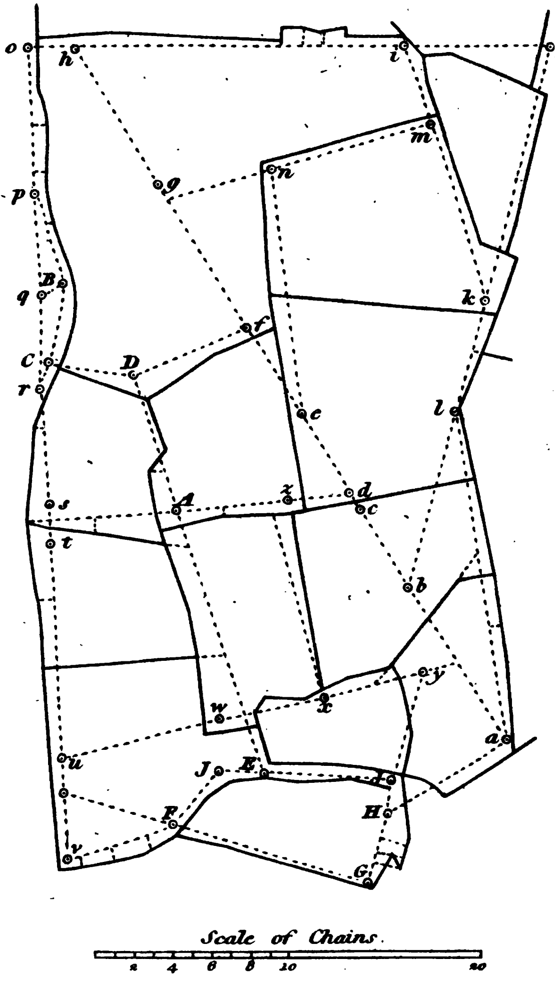

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Ditto, double-jointed frames	0	15	0
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Ditto, with green glasses for very weak and inflamed eyes, according to the frames, from 6*s*. to	1	1	0
Ditto, for the same purpose, with new contrived portable shades to screen the eyes from candle, or other light	0	15	0
Nose spectacles in silver	0	7	6
Ditto, in tortoiseshell and silver	0	4	6
Spectacle cases in great variety, from 2*d*. each to	3	3	0
Concave glasses for short-sighted persons, in horn cases	0	1	6
Ditto, in tortoiseshell, pearl, silver, &c. from 2*s*. 6*d*. to	2	2	0
Ditto in new contrived frames for shooting caps	0	16	0
Reading and burning glasses in various mountings, from 3*s*. to	1	16	0
Convex glasses for watch-makers, engravers, &c. from 1 . to	0	10	6
Gogglers, to guard the eyes from the dust or wind	0	2	6
New green light shades for the eyes	0	6	6

Printed by W. Glendinning, 25, Hatton Garden, 1805

	£.	s.	d.
Opera glasses in great variety of mountings, from 5*s.* 6*d.* to	2	12	6
Ditto on an improved construction of glasses, plain mounting	1	1	0
REFRACTING TELESCOPES of various lengths, 10*s.* 6*d.* to	1	18	6
Two feet day and night best achromatic telescopes....	3	13	6
Achromatic stick telescopes, of various lengths, from 18*s.* to	4	0	0
The new improved one-foot ditto, with three sliding brass tubes, by which an instantaneous view of the object is obtained, and shuts up to a short length for the pocket..	1	11	6
Second best two drawers ditto	1	1	0
Twenty inch best three-drawers ditto	2	12	6
Two feet best three-drawers ditto	3	13	6
Three feet best four-drawers ditto	6	6	0
Four feet five-drawer best ditto.	8	8	0
The preceding telescopes fitted up elegantly with silver or plated tubes, from 2*l.* 2*s.* to	21	0	0
Astronomical eye-pieces, and portable brass stands for the above, from 10*s.* 6*d.* to	2	12	6
The new improved 2½ feet achromatic refractor, on a brass stand, mahogany tube, with two sets of eye-glasses, one magnifying about forty times for terrestrial objects, and the other about seventy-five times for astronomical purposes, packed in a mahogany case	10	10	0
Ditto, ditto, the tube all brass, with three eye-pieces......	11	11	0
The 3½ feet ditto, ditto, mahogany tube	17	17	0
Ditto, ditto, brass tube	19	19	0
Ditto all in brass, with rack-work motions, &c. 26*l.* 5*s.* to	36	15	0
Achromatic perspective glasses for the pocket, in brass, &c. tubes, with a change of eye-glasses, from 12*s.* to	3	3	0
New improved ditto, answering the purpose of an opera glass, with a compass and helioscope for viewing the sun, from 1*l.* 3*s.* to	2	2	0
New improved achromatic pocket telescope, which, by a small apparatus within its tubes, is readily converted into a small compound microscope	3	13	6
An improved portable 7-inch achromatic telescope in brass, with a stand that packs up into the tube of the telescope, adapted for astronomical uses	3	13	6
REFLECTING TELESCOPES, fitted up either upon the *Gregorian*, *Newtonian*, or *Herschelian* principles, with improved wood or metal stands, and other apparatus, for making celestial observations in the most commodious and accurate manner.—The general prices are as follow:			
—Fifteen feet in length, the large metal fifteen inches in diameter, from 250*l.* to	500	0	0
—Twelve feet in length, fourteen inch metal	200	0	0
—Ten feet in length, twelve inch metal.	150	0	0
—Eight feet in length, eleven inch metal	140	0	0
—Six feet in length, nine inch metal.	100	0	0
—Four feet in length, in brass tubes, with portable brass or mahogany framed stands, from 40*l.* to	100	0	0

Those reflectors that are constructed upon the principles of Newton *or* Herschel, *are about twice the above lengths in the tubes. The reflectors upon the usual Gregorian construction are made with the vertical motion* *upon a new principle, so as to render them more firm and steady while in use, than any reflectors mounted in the common manner.*

	£.	s.	d.
A four feet 7-inch aperture Gregorian reflector, with the vertical motion upon a new-invented principle, as well as apparatus to render the tube more steady in observation; according to the additional apparatus of small speculums, eye-pieces, micrometers, &c. from 80*l*. to	100	0	0
Three feet long, mounted on a brass stand, common mounting	23	2	0
Ditto with rack-work motions, improved mounting, and metals	38	17	0
Two feet long, without rack-work, and with four magnifying powers, improved, 13*l*. 13*s*. to	15	15	0
Ditto improved, with rack-work motions	21	0	0
Eighteen-inch on a plain stand	8	18	6
Twelve inch ditto	5	15	6
Telescopes, both refracting and reflecting, fitted up with equatorial, &c. motions, micrometers, adjusting, compensating, &c. apparatus, for the most accurate astronomical purposes			
Common MICROSCOPES, from 5*s*. to	1	1	0
Wilson's single pocket microscopes, from 18*s*. to	2	12	6
Compound microscopes improved, from 2*l*. 12*s*. 6*d*. to	5	5	0
New improved universal ditto	6	16	6
Ditto with the most complete apparatus	10	10	0
Solar microscopes in brass, improved, from 5*l*. 5*s*. to	6	6	0
The new opake and transparent solar microscopes, with improved apparatus, from 10*l*. 10*s*. to	16	16	0
Ditto of a larger size, with additional megalascopic apparatus, from 14*l*. 14*s*. to	19	19	0
Ditto, and best compound ditto, packed together in one mahogany box	21	0	0
The LUCERNAL MICROSCOPE, as improved by *W. Jones*, exhibiting images of opake and transparent objects, by night or day, in a manner singularly pleasing, brilliant, and distinct, with upwards of 100 objects, proper apparatus, patent lamp, &c.	18	18	0
Ditto combined with a solar, compound, &c. apparatus, forming the most perfect collection of microscopical apparatus	39	18	0
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Pocket microscopes for opake objects, from 16*s*. to	2	12	6
Botanic microscopes for flowers, &c. from 8*s*. to	1	11	6
A new universal pocket ditto, adapted to all sorts of objects	1	6	0
Ditto with adjusting screw, silvered speculum, &c.	2	10	0
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	£.	s.	d.
Magic lanthorns, as phantasmagoria, &c. from 1*l*. 4*s*. to	6	6	0
Do. with new set of moveable painted sliders, shewing the funda-			

	£.	s.	d.
mental principles of astronomy, with the real and apparent motions and positions of the planets, stars, &c. &c. accompanied by a proper improved lanthorn, complete ..	13	13	0
Small magic lanthorns, with twelve sliders, complete, at *7s. 6d.*—*10s. 6d.*—12s. and	1	0	0
Ditto with twelve sliders of best English paintings	2	2	0
Optical diagonal machines for viewing prints, from *1l. 4s.* to	1	10	6
Perspective views in great variety for ditto, each	0	1	9
Scioptic balls and sockets, from *15s.* to	1	11	6
An artificial eye in brass, to exemplify the nature of vision	1	11	6

For a description of the principle of this instrument, as well as of spectacles, reading glasses, &c. see the late Mr. G. ADAMS's Essay on Vision, *8vo. price 3s. now sold by* W. *and* S. JONES.

	£.	s.	d.
Camera obscura for the pocket, from *9s.* to	1	16	0
A new-invented folding ditto, in portable morocco leather case	2	5	0
Large ditto, shutting up like a book or neat portable chest, the objects represented on paper, from *4l. 14s. 6d.* to..	6	16	6
Concave and convex glass mirrors, in plain black frames, four, five, six, and seven inches diameter, each *9s. 12s. 14s.* and	0	18	0
Eight inches diameter ditto	1	1	0
Nine inches ditto	1	7	0
Ten inches ditto	1	12	0
Twelve inches ditto	2	5	0
Fifteen inches ditto	3	13	6
Eighteen inches ditto	6	6	0
Twenty-one inches ditto	9	9	0
Twenty-four inches ditto	11	11	0
Concave mirrors ground cylindrically, possessing several curious properties in the deformation of objects; according to the size, from *1l. 1s.* to	5	5	0
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A curious set of optical models, where the rays of light are represented by variously coloured silken strings, and illustrating the principles of vision, telescopes, prisms, &c. packed in four cases	6	16	6

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A portable theodolite, with a telescope, level, and vertical arch	7	7	0
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	£	s.	d.
An improved ditto, contrived to answer the purposes of a common theodolite, level, altitude instrument, &c.	5	5	0
Surveying crosses or squares, on a staff, from 10s. 6d. to ..	1	11	6
A brass cylindrical ditto, with a staff	0	18	0
Ditto with compass, agate capped needle, &c.	1	11	6
Improved ditto, with rack-work and pinion, and moveable divided limb, making a very portable cross-staff, compass, and theodolite, in one small instrument	2	16	0
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Gunter's measuring chain, according to strength, from 5s. to	0	12	0
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——— ditto improved by Donn, with book of directions ..	0	5	0
——— ditto improved by Robertson, with brass adjusting screws, &c. being the completest scale of the kind ...	1	15	0
——— sectors of various lengths, from 2s. to	1	11	6
A new pocket 10-inch box sliding rule for solving all sorts of problems in trigonometry, mensuration, &c.	0	4	0
Measuring tapes, 1, 2, 3, and 4 poles, 5s. 7s. 6d. 9s. to	0	11	0
Pedometers for ascertaining distances, to apply to carriages. .	10	10	0
Miner's compasses for working in subterraneous grounds, from 1l. 6s. to	1	14	6
Cases of drawing instruments, from 4s. 6d. to	5	5	0
Magazine, or complete collection of every kind of useful drawing instruments, from 5l. 5s. to	35	0	0
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Ditto with a nonius and moveable limb	2	2	0
Ditto, ditto, with teeth and pinion	4	4	0

Sets of protracting and plotting scales; instruments for dividing lines or transferring divisions on paper. An instrument for describing circles from four to six inches radius or to the utmost conceiveable distance—Gunners callipers—Gunners levels or perpendiculars—Shot gauges—Shell

	£.	s.	d.
ditto—Gunners quadrants, with a plummet or level, or adjusting screw, &c. and all other instruments for military purposes.			
HADLEY's QUADRANTS, mahogany, the divisions on wood	1	11	6
Ditto mahogany with ivory arch and nonius, double observation	2	2	0
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Ditto, ebony and brass, best glasses, engine divided, &c. ..	3	0	0
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Artificial horizons, by parallel glasses and quicksilver, to take double altitudes by	1	16	0
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Azimuth compasses of different constructions, from *5l.* *5s.* to	12	12	0
Pocket compasses from *2s.* *6d.* to	5	5	0
Horizontal sun-dials, in brass, made for any latitude, of four, five, or six inches diameter, divided into five minutes of time, each at *7s.* *10s.* and	0	14	0
Ditto seven inches	0	18	0
Ditto eight inches, into two minutes	1	6	0
Ditto ten inches, ditto	2	0	0
Ditto twelve inches, ditto	2	18	0
Ditto fifteen inches, into every minute, thirty-two points of the compass, &c.	5	5	0
Ditto eighteen inches ditto, ditto, with equation table, &c.	9	9	0
Ditto 2 feet diameter, ditto, ditto	16	16	0
A new universal ditto and equatorial, making a very portable angular instrument, from *8l.* *8s.* to...............	31	10	0
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For a general description and representation of the instruments used in surveying, levelling, and other branches of practical geometry, see the late Mr. G. ADAMS's Geometrical and Graphical Essays, *an improved edition by* W. JONES, *in two vols. 8vo.* 1803, *with thirty-five folio copper-plates. Price 14s.*

ASTRONOMICAL, &c. INSTRUMENTS.

	£.	s.	d.
A portable TRANSIT INSTRUMENT, with a cast-iron stand, to ascertain the rate of chronometers, and clocks, the longitude, &c. the axis is twelve inches in length, and the telescope about twenty inches, packed in a case	12	12	0
Ditto, with a brass framed stand, and other additions	20	0	0
Transit instruments of larger dimensions made to order.			
The new CIRCULAR INSTRUMENT and EQUATORIALS, from *63l.* to	180	0	0
Planetariums, shewing the phænomena of the Ptolemaic and Copernican systems, from *7l.* *7s.* to	50	0	0
Manual orreries of the common construction, *2l.* *12s.* *6d.* to.	5	5	0

	£.	s.	d.
Jones's (Wm.) new portable orrery, the tellurian part	1	1	0
Ditto, the planetarium part	1	1	0
Tellurian and planetarium together, making the *New Portable Orrery*, packed in boxes, according to the sizes and wheel-work, from 2*l*. 12*s*. 6*d*. to	5	5	0
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N. B. These are the only modern 18-inch globes in the English language extant, the plates being engraved from entire new drawings, and are dedicated, by permission, to the Right Hon. Sir *Joseph Banks*, Bart, P. R. S, and the Rev. Dr. *Maskelyne*, Astronomer Royal.			
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A pair of red leather covers for ditto	1	6	0
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Ditto, in more elegant and varnished frames, with improved brass sliding hour circle, from 13*l*. 13*s*. to	17	17	0
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Ditto, six inches ditto, plain frames	2	0	0
Ditto, ditto, best mounting	3	3	0
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Ditto, three inches, single one in a case for the pocket	0	9	0
Geographical planispheres, to solve problems, mounted as a hand fire screen	0	7	6
A brass armillary sphere, three inches diameter	3	13	6
A four inch ditto	4	14	6
A six inch ditto	6	6	[illegible]

	£	s.	d.
A nine inch ditto	9	19	6
A brass armillary sphere, twelve inches diameter	13	13	0
Larger ditto, with planetarium, from 21*l.* to	105	0	0

For a general description of orreries and other astronomical instruments, see the late Mr. G. ADAMS's Astronomical Essays, *8vo. with sixteen plates; fifth edition, price* 10*s.* 6*d. now sold by* W. *and* S. JONES.

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A single-barrel AIR-PUMP, with receiver	2	12	6
Improved ditto, exhausting more accurately	5	15	6
A small double-barrel air-pump, with gauge-plate	5	5	0
A middle size ditto	7	7	0
A large size table ditto	11	11	0
Air-pump of the largest sort, exhausting more accurately, being upon an improved construction, from 20*l.* to	34	13	0
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The principal Apparatus for the Air Pump as follow:

Guinea and feather apparatus, demonstrating the resistance of the air, with one, two, or three falls, from 18*s.* to	1	11	6
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Lead weights, with bladder, &c. proving the air's elasticity	0	17	0
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A copper air-pipe for experiments on infected air	0	17	0
flat plate, collar of leathers, with sliding wire, for placing on receivers	0	12	0
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An apparatus for striking flint and steel in vacuo	0	18	0
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Six breaking squares, cage and cap	0	9	0
Glass bubble and stand	0	3	0
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With a great variety of receivers, and other apparatus, as described by various authors.

	£.	s.	d.
Exhausting and condensing syringes, from 10*s.* 6*d.* to	1	11	6
Exhausting syringes, with sets of cupping glasses, breast glasses, with scarificator, complete	4	14	6
Air fountains of copper, with various jets, from 5*l.* 5*s.* to	9	9	0
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New and much improved ditto, from 3*l.* 13*s.* 6*d.* to	42	0	0
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Apparatus for Electrical Machines as follow:

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Electrical batteries of combined jars, from 2*l.* 12*s.* 6*d.* to	10	10	0
An universal discharger, with a press	1	8	0
A quadrant electrometer with divided arch	0	7	6
Jointed dischargers with glass handles	0	10	6
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An useful and illustrative apparatus, compounded of the luminous conductor, exhausted flask, two jars, exhausting syringe, insulated stand, and wires with balls, &c. complete	3	3	0
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An electrical shooter and mark	0	5	0
A mahogany stand for eggs	0	4	6
A small head with hair	0	7	6
An artificial spider	0	1	6
An electrical swan	0	2	0
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	£.	s.	d.
A curious collection of working models, to be set in motion by the electrical fluid, consisting of a corn mill and a three-barrelled water pump, worked by one crank only; an orrery, shewing the diurnal motion of the earth, age, and phases of the moon, &c. an astronomical clock, shewing the aspects of the sun and moon, age, phases, &c all delicately made of card-paper, cork, and wire only, packed in a deal case	2	12	6

	£.	s.	d.
Kinnersley's electrical air thermometer	1	1	0
Cavallo's atmospherical electrometer	0	10	6
Ditto, as improved by Saussure	1	1	0
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The new discharging electrometer, by which the forces are denoted by grain weights	1	18	0
Volta's new Galvanic pile of zinc, and silver, or copper, &c. plates, that produces spontaneous and repeated electricity, decomposes water, from 1*l*. 18*s*. to	6	16	6
Zinc plates for ditto, sold separately, per 100	0	15	0
Ditto, in troughs, to form Galvanic Batteries, from 1*l*. 18*s*. to	10	10	0
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Conductors for the preservation of ships, houses, &c. from lightning, from 3*l*. 3*s*. to	5	5	0

The Medical Apparatus consists of

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Jars with electrometers, from 12*s*. to	1	1	0
A new medical ditto, for communicating shocks in the most convenient and qualified manner	0	7	6
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An electrometer to apply to the conductor	0	6	6
A brass ball and wire for taking sparks, 4*s*. 6*d*. to	0	6	6
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A glass for the eye	0	4	6
Ditto for the ear	0	2	6
A new perpetual inflammable air lamp, lighted by the electrophorus, a curious and useful apparatus	4	4	0

A variety of other apparatus too numerous to be herein inserted, which, as well as the machines, are mounted from the most approved eligible methods, so as to render them in action both powerful and permanent.

For a description of electrical apparatus, see the late Mr. G. Adams's Essay on Electricity, *by* W. Jones, 8*vo. six plates*; *new edition, price* 8*s*. *in boards*.

	£.	s.	d.
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